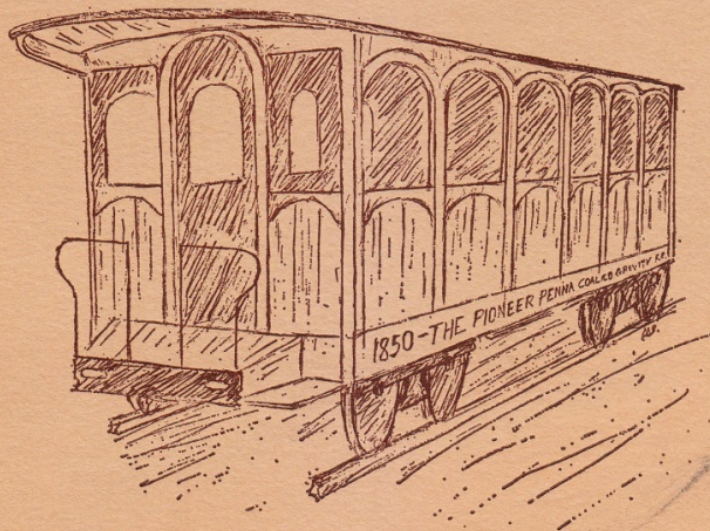


"The Gravity"

History of The Pennsylvania
Coal Company Railroad

1850-1885



By

MARY THERESA "T. C." CONNOLLY

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DEDICATION

THROUGH the grace of God, love of my father and true generosity of a dear aunt it was possible for this paper to be done and dedicated to my beloved mother.

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INTRODUCTION

By the late 1840's the real value of coal, "The Black Diamond", had been firmly established. As a result of this discovery the problems of cheaper transportation and shorter hauling routes had to be solved. Both the Pennsylvania and Washington Coal Companies, therefore, decided to build a gravity railroad basing their decision on the success of the already functioning Delaware & Hudson Gravity Railroad. Their new railroad was to run from the Wyoming Coal Fields in Pittston to the Delaware & Hudson Canal basin in Hawley, Pennsylvania. In less than two years engineers had small gravity cars scaling hills, racing across flatlands, and careening mountainsides to their destination. Under the name of the Pennsylvania Coal Company Railroad the proposed gravity became a reality further developing the transportation history of "Old King Coal" in north-eastern Pennsylvania. The new railroad ran by simple gravitation, inclined planes and stationary three-cylinder engines.

While reading the story of coal in that era one soon discovers that the chapter on transportation is somewhat neglected. When information has been supplied it tends to be brief, inadequate, incomplete, or inaccurate. Many articles whether in books, magazines, or newspapers neglect to even mention that because of this railroad many existing towns (Port Griffith, Pittston, Avoca, Dunmore, and Hawley) were permanently established.

Research done in preparing this paper left no doubt in this writer's mind that had it not been for the Pennsylvania Coal Company and its General Manager John B. Smith, neither Dunmore nor Hawley would have grown and prospered in the late 1800's and early 1900's. These sparsely settled areas were soon developed by the Company employees desiring to live nearer their work. Both Hawley and Dunmore were important points on the Gravity in the 1850's. In the 1860's, however, the Company decided that Dunmore would act as the central headquarters for all operations and house the main offices. After the construction of the new buildings (shops, breakers, pockets), and "The Big Office", (as the Main Office came to be known) the permanence of Dunmore as a town was further insured, since the railroaders made their homes where they were assured of steady employment.

This paper is offered as an accurate account of the Pennsylvania Coal Company Railroad and while it may well be the first accurate compilation it does not claim to be complete. Nor is it an exaggeration to state that completion is almost an impossibility since the Pennsylvania Company didn't encourage much publicity or open publication of its records. Only recently (within the past ten years) this Company was forced to destroy records that pertained to the Gravity, tonnage, prices, etc.; records that were invaluable to any local historian. One reason given for the destruction of these files was lack of space for housing older documents.

Despite these adverse conditions and limitations, however, it was still possible to gather much needed material from other sources. Various county historians and a few local histories carried initial information on the existence of the Gravity. The litigations which lasted for seventeen years between the Pennsylvania Coal Company and the

Delaware and Hudson Canal Company were also bound and published and were available for examination at the Lackawanna Historical Society. These volumes were especially valuable to this writer when trying to piece together the intricately entangled web of financial fusion that brought about the Pennsylvania Coal Company Railroad. To this the writer made only a passing reference recognizing that a great deal of wheeling and dealing transpired in this region before the Gravity was actualized. It is for Edward Steers, M.D., nevertheless, to develop in depth this aspect of the Gravity's story in his forthcoming publication. Still more information was gleaned from the yellowed yet interesting accounts which were carried by the Scranton Times from 1903-1930's of the Annual Reunion of Gravity employees of both companies. Once-a-year the former Gravity men met recounting their varied experiences, memories and tales of that by-gone era. James O'Connor, a Scranton Times Staff Writer, was assigned to cover the meetings and report the proceedings which he did extremely well, being the proud son of a former Gravity man himself. Verifications or corroboration was possible in some cases by consulting the few written interviews submitted by former Gravity workers and available in the Scranton Public Library. In fairness to the reader it must be noted that these written remembrances were given when these Gravity employees were in their 70's and 80's and in some cases their recollections conflicted greatly with one another and, even earlier written articles. Thus, it was left to this writer to try to discern and evaluate each contribution, weighing each comment and remembrance against what in truth did happen.

There are two very important points which deserve clarification before this history is begun. First, the official name of the railroad under discussion was the Pennsylvania Coal Company Railroad and not the Pennsylvania Gravity. Recent articles have erroneously referred to a Pennsylvania Gravity either as a matter of expediency or title differentiation. The Delaware & Hudson Gravity Railroad was also operating in this region at that time. Those less familiar with the Gravity might even confuse it with the present Pennsylvania Railroad. The railroad under study ran from 1850 to 1885 and was abandoned with its rights purchased first by the Erie and Wyoming Valley Railroad and later by the Erie Railroad.

The second point to be clarified regards the coal region involved — the Lackawanna and Wyoming Valley Coal Fields. In the case of this coal region it has been mistakenly thought that these were two separate and distinct valleys. The name really refers to parts of the same coal valley. The upper part of the valley took its name from the Lackawanna River, which flows through the land just above Carbondale and on down towards Pittston, where it empties into the Susquehanna River. The Wyoming Valley is the area through which the Susquehanna flows from Pittston to Nanticoke. The Lackawanna and the Wyoming Valleys constitute the entire northern anthracite coal field, which begins in Forest City in Susquehanna County just above Carbondale and extends down to Nanticoke.

Chapter 1

THE INITIAL DEVELOPMENT OF THE PENNSYLVANIA COAL COMPANY RAILROAD

In 1838 the Pennsylvania State Legislature granted and approved two charters which became law by April 16 of that same year. One charter went to the Washington Coal Company; the other to the Pennsylvania Coal Company. The act was known as "AN ACT TO INCORPORATE THE WASHINGTON COAL COMPANY AND FOR OTHER PURPOSES." The first thirteen sections of the Act were related to the Washington Coal Company which was incorporated for the purpose of mining coal, and transacting the usual business of companies involved in the mining, transporting, and selling of coal and other products of coal mines. The company had a capital of \$300,000 and was empowered to hold no more than two thousand acres of land at any one time, the whole acreage to be within the Lackawanna Valley, then a part of Luzerne County. Nothing was said, however, of allowing the Company any banking privileges. The Charter for this Company was granted to William Dimmock and others from the Honesdale area.

The balance of this 1838 Act, beginning with Section Fourteen related to the Pennsylvania Coal Company also incorporated for the purpose of mining coal. The Act provided that this Company should "have the right to hold no more than one hundred acres of land at any one time, the whole to be within the township of Pittston and to sell or otherwise dispose of the same as the interest of the Company might require. Their capital stock of \$200,000 was to be divided into shares of \$50 each". (1) Numerous amendments were added to this Act, viz — authorization for the Company to hold other lands in Lackawanna, Nescopek, and Providence townships, and the right to extend and connect its railroad with the Delaware & Hudson Canal.

By 1839 the Pennsylvania Coal Company had begun to operate on a small scale in the Pittston area, mining and shipping coal to Harrisburg and other towns along the Susquehanna for almost ten years. But by the latter part of the 1840's it was realized that efforts should be directed toward devising a shorter route for transporting coal to the colder regions of the East. In an effort to reach and service the more prosperous New York and New England fields the idea of a gravity railroad took shape and was soon being promoted.

The Washington Coal Company, the first of the two companies chartered, originally had the authority to construct a railroad from the Delaware & Hudson Canal to an intermediate point, therefore, technically speaking, it was this Company that began the actual construction of the Pennsylvania Coal Company Railroad in 1847. (2) Before one can fully comprehend the whole story of this railroad an explanation of the circumstances leading to its construction is necessary.

In 1847 the Commissioners of the Washington Coal Company, under the leadership

(1) Author unknown, *The Pennsylvania Story*, (Scranton: The Pennsylvania Coal Company, 1950), p. 25.

(2) Hereafter the Pennsylvania Coal Company Railroad shall be referred to as P. C. Co. R.R. and the Delaware & Hudson Canal Company shall be the D&H Co.

of Charles and William Wurts, went to the D&H Company desiring to mine coal and sell it to the D&H Co. The Washington Company controlled land in the area of Dunmore and Providence and in order to accomplish its task it would need a railroad which would transport its coal to the D&H Canal in Hawley. So the Commissioners of the Washington Company asked the D&H Co. to help them solve their transportation problems. The D&H Canal Co. and its President John Wurts wanted to investigate what he and his Company would be getting into if they chose to help the Washington Coal Company. The D&H wholly realized two important factors at this time:

1. "Those who owned and controlled either the P. C. Co. or the Washington Coal Company had the necessary capital or communication facilities. So . . .
2. If there was good coal property in the designated areas (lands that both the P. C. Co. and the Washington Coal Company were chartered to operate) someone with know-how and capital would soon move in and the D&H would have undesired competition. Therefore, it would pay the D&H to investigate this request and the land in question. If the land was of any real value it would be well to purchase and control it". (3)

The D&H Co. quickly appointed James Archbald Esq. to survey and investigate the land and coal areas in question. Archbald's findings and testimony regarding the lands he carefully surveyed may be read in Exhibit Y of the P. C. Co. and D&H Litigations volumes which are presently housed at the Lackawanna Historical Society. Based on Archbald's report a new company was formed in New York — The Wyoming Coal Association. The new Company's membership was made up principally of New York and Philadelphia businessmen, among whom were: Irad Hawley, William R. Griffith, John Ewen, William Harrimen, Fanning C. Tucker, Charles N. Talbot and Ebenezer Caldwell. Messrs. Hawley and Talbot were also directors of the D&H Co. and through this new company a large amount of additional land was secured for transportation on the Canal. In short, in the ensuing months the D&H would be doing business with itself when dealing with the Wyoming Coal Association since these two companies had interlocking directors. The date of the first one-sided transaction was Aug. 2, 1847 when on the recommendation of Archbald the newly formed Association purchased lands belonging to the Washington Coal Company and the D&H. Isaac Platt signed this 1847 document as Vice President of the D&H since John Wurts the President was supposedly on vacation. Wurts also occupied a director's chair on the Wyoming Board it may be noted.

Since the prominent men connected with the D&H were also stockholders in the new Gravity venture they chose Archbald to go a step further and begin to survey the lands for their new train. Previous to this appointment Archbald had been General Manager of Mines and Railroads at the D&H. He began his work in November of 1847 and enlisted the aid of Gideon Frothingham and James Seymour to help him lay out the general gravity route. The countryside between Dunmore and Middle Creek where it meets the Lackawanna River was almost unbroken forestland with only a few wagon paths marring it. It was Archbald's job to find a route that would connect the coal fields in and around Dunmore with the D&H Canal. Frothingham worked the eastern or canal end of the route, and Seymour began the line of planes necessary to reach the top of the Moosic Mountains. John Stephens and Philander Silsbee assisted Seymour in locating the area for the loaded track — track carrying the loaded cars. E. W. Weston, a civil engineer, located the loaded track from Middle Creek to Hawley with his assistant Justice Alfred Hand who at that time was a "rodman."

(3) Personal interview with Edward Steers, M.D., January 28, 1967. Dr. Steers has spent many years studying and acquiring information regarding gravity railroads in North eastern Pennsylvania.

At a later date W. R. Maffet was added to the engineering staff when it was decided to extend the gravity road into Wyoming Valley. Maffett relocated the line of ascending planes from Pittston to the Moosic Mountains and he had working with him C. I. A. Chapman whose immediate supervisor was Jacob Allsbaugh while he was on Number 5 Plane.

The Luzerne and Wayne County Railroad Company was incorporated in 1846 with the power to construct a railroad from the Lackawanna to the Lackawaxen River. Early in 1849, however, the Company's charter was merged along with the Washington Coal Company on April 9, 1849 by an act of the Legislature. (4) "The document was known as "THE WASHINGTON COAL COMPANY AGREEMENT OF TRANSFERMENT TO THE PENNSYLVANIA COAL COMPANY AND ACCEPTANCE", and it was signed by James Archbald, the first and only President of the Washington Coal Company and William R. Griffith, President of the P. C. Co." (5) By this 1849 contract the P. C. Co. had the authority to extend its railroad bed to Pittston where the Washington Coal Company lands had also been located. The rights of the Wyoming Coal Association were later absorbed by the P. C. Co. on February 15, 1851 and on May 30, "THE ASSIGNMENT OF CONTRACT BETWEEN THE D&H CANAL COMPANY AND THE WYOMING COAL ASSOCIATION TO THE PENNSYLVANIA COAL COMPANY" was also signed. Thus, it was through multimanaged mergers that the P. C. Co. ultimately completed, equipped and put into operation the second gravity railroad in northeastern Pennsylvania — The Pennsylvania Coal Company Railroad.

Even though Archbald began working with his crews in November, 1847, little construction on the railroad actually took place for over a year with the exception of the erection of the Hawley shops and furnaces. This scant construction of November, 1847 was attested to in the "ANNUAL STATEMENT OF THE D&H CANAL COMPANY FOR THE YEAR ENDING IN JULY 1848."

"The most important event that has occurred during the year, in reference to the stockholders, is the commencement of a railroad by the Washington Coal Company, which is intended to connect the lower part of the Lackawanna Coal Field with the canal. This company is about 10 miles below Honesdale." (6)

Early construction of the gravity by the Washington Coal Company was further verified by an article which appeared in the Honesdale Herald on April 19, 1848 which said:

"This point is the eastern terminus of the Washington Company's Railroad. Major J. of Honesdale, is superintending the erection of a building 130x32 feet for a machine shop. South of this building a large foundry, where it is designed to do the casting for the entire operations of the railroad. A space embracing some four acres is being graded for the purpose of receiving such other shops as may be necessary for the use of the Company." (7)

Begun, therefore, in November, 1847 the Gravity was completed by June 1850. (8) Various reports, newspaper articles and magazines have oft-times given the date of completion as May, 1850—a date which is valid only if they are referring to the P. C. Co. R.R. as it ran from Dunmore to Hawley. When referring to the Gravity as a total railroad, however, the date of completion was June, 1850. It took approximately ten more

(4) The Scranton Times, September 3, 1910, p. 5.

(5) Interview with Edward Steers, M.D., January 28, 1967.

(6) The Scranton Times, September 2, 1911, p. 5.

(7) Ibid.

(8) Report of the Board of Directors of the Pennsylvania Coal Co. to the Stockholders, March 19, 1851, p. 5.

days to complete the roadbed from Dunmore to Port Griffith after the road from Dunmore to Hawley had been finished and opened and this accounts for the difference in dates provided by various sources.

The coal transported from Port Griffith and Dunmore to Hawley was then transferred to boats and shipped over the D&H Canal to Jersey City and New York via the Hudson River. See Appendix II for a survey of the entire route to markets. The D&H Canal ran one hundred and eight miles to meet the Hudson River at Rondout, (known today as Kingston), New York.

Irady Hawley was the first President of the P. C. Co. as it existed with its railroad in 1850. Hawley, Pennsylvania, earlier known as Paupac Eddy, was named by Michael V. Morris in honor of Irady Hawley. James Archbald Esq., a General Superintendent of this same line also had a town named in his honor. In 1854 John B. Smith succeeded Archbald as Superintendent.

It was under the aegis of John B. Smith that the greatest era of advancement for the railroad took place — production was boosted to the then astounding figure of 1,862,092 tons annually, valuable coal and timber lands were purchased, passenger and freight service were inaugurated, and breakers were constructed at Number 6 in Dunmore and also in Hawley. Besides receiving most of the credit for the real development of the P. C. Co. R.R., Smith was also given credit for the emergence of the permanent town of Dunmore. The following is a description of the settlement in 1847 and Smith's role in its development:

"A store was operated at the Corners in 1820 under the aegis of the Drinker Turnpike but the village, consisting of but 4 houses had but a negative existence until the Pennsylvania Coal Company in 1847-48 turned the sterile pasture fields around it into a town liberal in the extent of its territory and diversified by every variety of life. The immense machine shops of this company, concentrating and fostering a vast amount of superior mechanical skill, are located at Number Six (Dunmore) and serve to give Dunmore additional note and character as a business village . . . Dunmore can congratulate itself not so much upon the internal wealth of the hills as upon the vigor of the men who furrowed them out, and thus encouraged a town at this time deriving its daily inspiration wholly from this source.

General Superintendency has been exercised by John B. Smith through an administration of nearly 20 years as jointly to advance the interest of the company, impart strength of development to Pittston, Dunmore and Hawley and change the circumstances and fortunes of a large class of men employed along the line of the road." (9)

Later, in this same work the author concluded a short historical sketch of Smith with "It is conceded that to no one person is the early improvement of Dunmore due more than to the Honorable John B. Smith of Pennsylvania Coal Company. Up to 1847-48 it consisted of 4 houses." (10)

In May of 1852 the P. C. Co. believing that its original agreement with the D&H Company bore upon its interest unequally, ended their toll agreement. The trouble which arose between the two companies concerned the terms of their contracts and the

(9) W. W. Munsell, (ed.) HISTORY OF LUZERNE, LACKAWANNA AND WYOMING COUNTIES, PENNSYLVANIA. (New York: W. W. Munsell & Co., 1880). p. 211.

(10) Ibid., p. 397.

rightful interpretation of the original contract. The legal questions were referred to the New York and Pennsylvania courts by the D&H Company and remained in the courts for seventeen years.

General John Ewen later a President of the P. C. Co. and after whom the Ewen Shaft in Port Griffith was named helped to conduct the successful defense of his company against the adverse litigations which began in early 1853. This seventeen year court battle cost thousands of dollars for each company to continue but it was finally won by the P. C. Co.

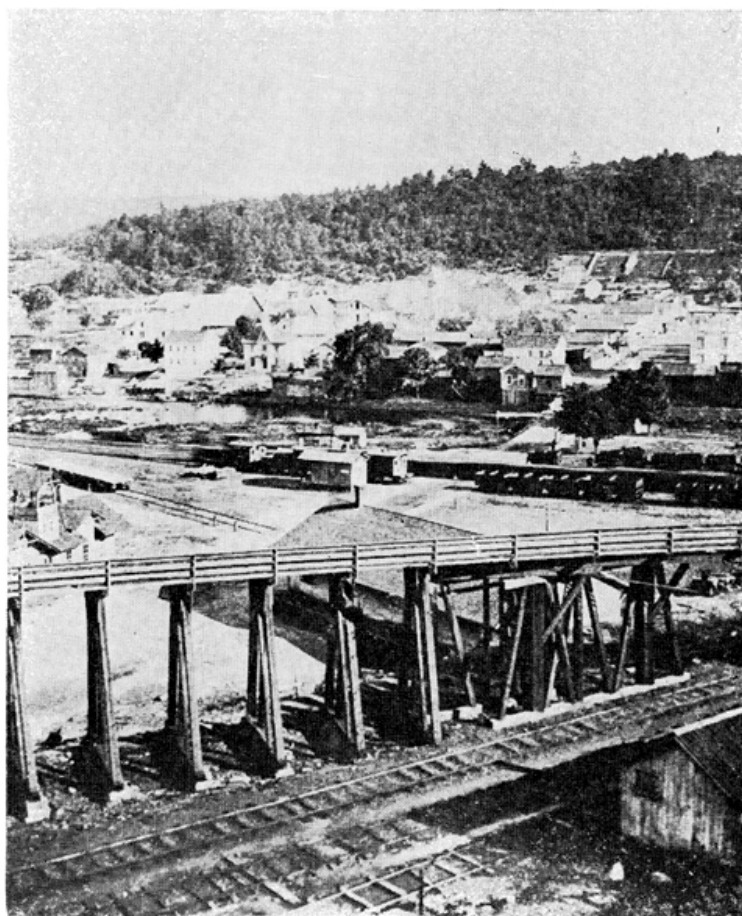
During these years of legal entanglements the P. C. Co. decided to find another outlet to market its coal. With a view to increasing their business and securing the advantage of winter transportation it was able in 1860 to obtain a franchise allowing it to construct and maintain a steam railroad from Hawley and to connect with the Erie Railroad at Lackawaxen, a run of sixteen miles. All of 1863 through to December was used to construct this new line. By December 23, the new Hawley Branch was ready to send its first shipment of coal. The weighmaster in Hawley then was Frank Hardenburg. This was the first steam railroad to exist in Hawley and its locomotives were at that time capable of pulling about one thousand tons.

The Hawley Branch was actually built by the P. C. Co. but it was leased to the Erie who in turn maintained it as part of its system and shipped Pennsylvania Coal to Newburg, New York and on to Jersey City.

As a cargo ship building center, Hawley from 1864 on was to crumble. Originally, boats of all sizes were made in Hawley for hauling coal on the Canal. Because of severe winter weather, however, canal operations were annually suspended often for as long as two months at a time. Therefore, the inception of the new overland steam route obviously caused a sharp decline in Canal patronage. At long last the P. C. Co. was able to boast of having year round shipments to her markets.

Coal pockets were constructed in Hawley to store the various sizes of coal with Robert B. Arnold in charge of loading and Patrick J. Reilly in charge of weighing the empty coal cars. W. L. Overton was weigh-master and in charge of billing the loaded cars. At that time there were about one hundred and twenty men employed at the Hawley pockets.

During 1862 and 1863 the machine and car shops in Hawley were in need of extensive repairs. Since these shops were so far from the coal mines and would be so costly to renovate, it was decided that new and enlarged buildings should be erected closer to the mines. The company officials selected Dunmore as the site of the new shops because practically all the work for the railroad and mines was done there. Some of the fine stone structures built then were later used by the railroad's successor — the Erie Railroad. The new shops manufactured every type of machinery needed to operate the trains, roads, and mines. The photos contained on the following pages were taken in the 1870's and are of the shops spoken of. The last of this group of photos is one of the Main Office of the P. C. Co. where it stood until mid 1960's on Mill and Chestnut Streets in Dunmore. Today the main office is located in the Erie-Lackawanna Railroad Station on Lackawanna Avenue, Scranton.



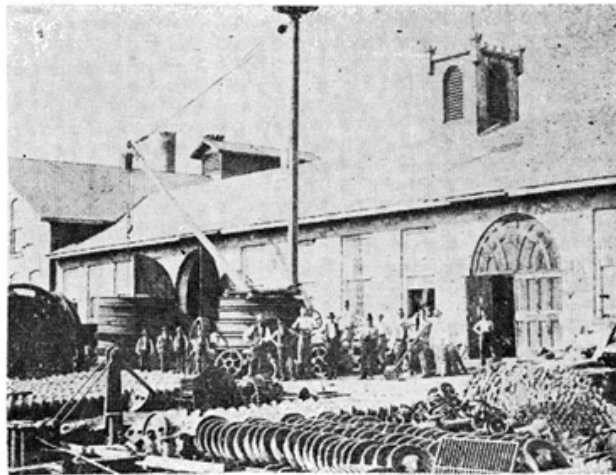
HAWLEY, PA., SEEN FROM THE HIGH WORKS.

This is not on Hensel's list under this caption. It was certainly taken by him, however, and it may be one of the "Views from the Head of Number Thirteen plane." It is one of a group of pictures that are included to show the magnitude and complexity of the Gravity's operations in Hawley.

The odd shaped building at the left edge is the Erie Station; the water is Middle Creek flowing toward the left. The tracks along it are Erie tracks, leading, to the right, to the coal pockets where Penna. Coal Co. coal was transferred to the Erie.

On the opposite hill at the right is a cemetery, and the bridge, just visible behind trees, crossing Middle Creek, also appears in another picture and helps to tie the different views together.

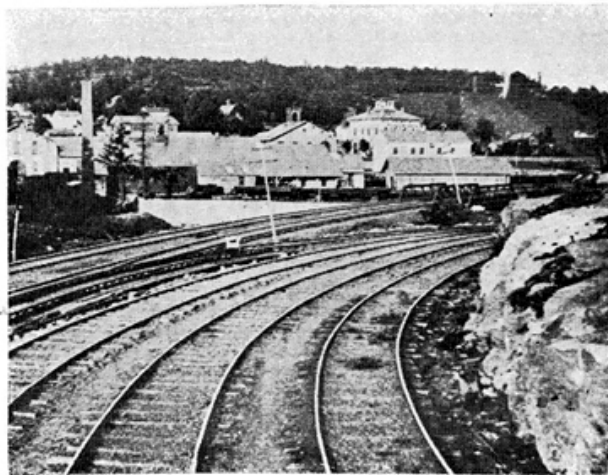
The trestle in the foreground is part of the system by which cars were shifted from place to place; the tracks in the immediate foreground could be on the loaded track, coming in from the right. This last is pure conjecture, but not inconsistent with other known facts.



PENNSYLVANIA COAL COMPANY'S SHOPS AT NUMBER SIX.

Original photograph by Hensel.

Copy by E. P. Hulbert.



**PENNSYLVANIA COAL COMPANY'S SHOPS AND OFFICE BUILDING AT
NUMBER SIX, DUNMORE, PA.**

Seen from a point on the loaded track, coming in to Number Six.

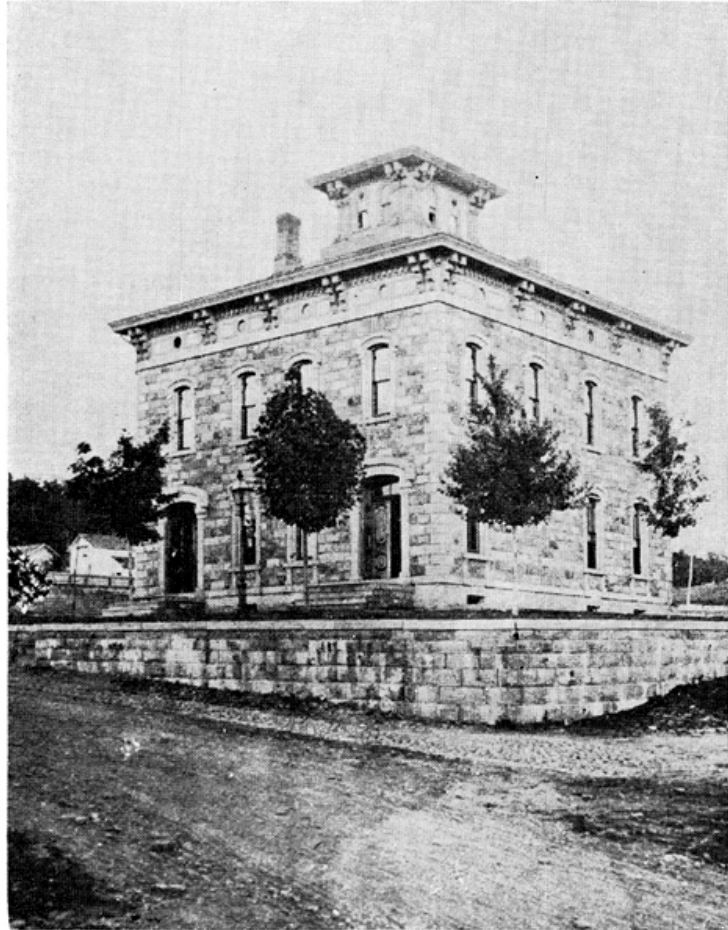
All the tracks at the right belong to the Gravity; those to the left to the D. L. & W., toward the right is toward New York.

The Gravity curved to the left just beyond the edge of this picture, passed under the D. L. & W. bridge at the right, and at that point reached the foot of Number Six plane.

On the skyline to the right is the breaker past which the plane ran, as shown in two of the following pictures.

Original photograph by Hensel.

Copy by E. P. Hulbert.



**THE MAIN OFFICES OF THE PENNSYLVANIA COAL COMPANY, DUNMORE,
PENNSYLVANIA**

A goodly number of families in Hawley moved to Dunmore in the early 1860's in order to find and maintain employment as a result of this decision to move the shops and offices to Dunmore.

Chapter 2

TRACKAGE

The P. C. Co. used two different sets of tracks for operating its Gravity railroad — a loaded track carried carloads of coal from the Wyoming Fields to Hawley and a light track was used for returning empty cars. The loaded track ran northward from Port Griffith to the basin of the D&H Canal in Hawley. At some points along the route the distance between the two tracks was as much as a mile. Occasionally the sets did cross one another, however, by means of crossovers at such levels as Planes 3, 4, 5, 12 and 14. Statements regarding the construction and usage of overpasses were found in Hulbert's work.

"There was an overpass or crossover from the head of Number 12 loaded track to the foot of Number 19 light track and a horsedrawn shuttle connected them so that 'Pioneer' passengers could get to points on the light track between Number 19 and Dunmore without going around by way of Hawley." (11)

Again in a letter by James O'Connor mention was made of using an overpass. "The loaded track passed under the outbound or light track at Number 14, two miles from Hawley." (12)

The Gravity tracks were of narrow gauge — four feet and three inches. Caps, often referred to as "crossties", were placed about ten feet apart with Hemlock timber placed perpendicularly on the ties producing the rail effect. To be sure that the timber would remain securely in the tie a piece of wood was carved out of the tie to insert the six to eight hemlocks which ran twenty or thirty feet long and crossed the three or four inch caps. A piece of beechwood, two or three inches wide and seventeen or eighteen feet long, was then fastened to the hemlock and a strap of iron, three inches wide and one half inch thick, was spiked into the wood. The spike holes were countersunk two and one half feet apart and the ends of the iron straps were dovetailed to produce the effect of being one continuous piece.

Operated by gravity the roadbed consisted of twenty-two inclined planes constructed with grades running downward in the direction of traffic. Archbald had discovered from his previous experience with D&H trackage that a descent of forty-seven feet per mile was required for the empty track. Thus the surveying engineers had to seek ground on which the longest planes, having the descent and direction required, could be laid and in some way connect with the ascending planes. The engineers determined grade by the length of chain used, sixty feet for the loaded track and fifty-four feet for the light track, with each station having a half inch fall. (13) The gravity cars were raised to the summits of grades by inclined planes of stationary water or steam power and sent downward by the force of gravity across levels at a regulated speed of twelve to fifteen miles per hour. Each of the twenty-two planes had its own powerhouse and most of

(11) E. P. Hulbert, *The Pennsylvania Coal Company Gravity Railroad*, a report prepared for reading at the Lackawanna Historical Society, December, 1949, pp. 17-18.

(12) M. J. McAndrew, *HISTORY OF HAWLEY*, (Scranton: K&P Pub. Co., 1927) p. 79.

(13) *The Scranton Times*, September 4, 1909, p. 3.

them were operated by steam. Originally, however, Numbers 13, 14 and 15 were powered by water. This fact is verified by O'Connor in McAndrew's work and again in Hulbert's paper.

"A dam was built in Middle Creek at nearly the west end of 'Marble Hill'. A little canal was constructed from this dam to the foot of Number 13 where a coal pile existed. This water wheel ran the plane on which coal from the storage dumps along the Lackawaxen were hoisted. At Number 14 the loaded track passed under the light track two miles from Hawley. There was another water wheel at Number 14 in the early days and it was fed by a canal from Middle Creek. The wheel runners were Charles Hand and William Hand. A long wooden aqueduct was built at Wangum Falls. This structure also took water from a dam in Middle Creek above the Falls and carried it across the valley to Number 15 on the light track where it drove the big wheel which hoisted the cars, and which, after fifteen or twenty years of service was replaced by a steam engine. This water wheel was first run by Jacob Ames and after him John Ames and Ezra Swingle". (14).

There is reason to believe that Number 16 was also powered by water power, though this contention has been strongly refuted. With proper engineering it is very possible that water power was used. Why else would the Wyoming Coal Association have purchased all the marshes adjacent to the road and the right-of-way which they bought from the D&H on August 2, 1847? (15)

The planes and inclines were originally equipped with three inch hemp rope, but, due to its expense and frequent need of repair, it was soon replaced by steel cable invented by John Roebling. This tow cable was wound around two large cast iron wheels held in a piece of shafting attached to the power. Cones consisting of three or four links were attached to the cable at equal distances allowing one "trip" to be at the foot of the plane when another was at the head.

Research also confirmed the fact that the water in Middle Creek and Wangum Falls was invaluable in supplying water power for operating the foundry, machine shops, hoistings, screenings, and other operations going on in Hawley necessary to preparing coal for market.

LOADED TRACKS. The first twelve planes — the loaded tracks — on the P. C. Co. R.R. ascended while making the run to Hawley and reached their highest point — 1,400 feet above Port Griffith — at the top of Number 11.

Traveling from the mines of Port Griffith the loaded coal trains began on Plane 1 and ran at a speed of between twelve and fifteen miles per hour arriving at Plane 2 in Pittston. These tracks or right of ways were located on what, until the end of 1966, was formerly the Erie Railroad bed, crossing Frothingham, Oak, Railroad, and Pine Streets and entering the Basin at Broad Street, by the Erie Station where a terminal then existed. At that time in history the P. C. Co. offices were located at Main and Broad Streets in Pittston where the Miners Bank now stands. The basin actually was at the foot of Number 2 Plane. Loaded cars were hoisted up Number 2 at the top of Carroll Street to the summit in Hughestown. From there the train traveled along passing Old Number 8 Breaker, McAlpine Street in West Avoca—the foot of Number 3 Plane. Leaving the head of Number 3 in Avoca, located near the top of what is now Vine and William Streets, the trains moved northeastward to the foot of Number 4 near Rocky Glen in Moosic. Even today Rocky Glen is sometimes referred to as Number 4 by older

(14) McAndrew, pp. 30 & 79.

(15) Strong advocate of this contention, Edward Steers, M.D.



MOOSIC MOUNTAIN TUNNEL

Just beyond the head of Number Eleven plane, which was the summit of the climb over the Moosic Mountain, at an elevation of a little less than two thousand feet. The tunnel was eight hundred feet long, and saved the expense of another plane. (Article by Carl Neuffer, Chief Engineer Pa. Coal Co.).

ALONG THE LIGHT TRACK ON THE CLIFF OPPOSITE GREENVILLE

The buildings are a tannery, (Mackey's?), and the stream Roaring Brook. On the other side of the valley is the D.L.&W.R.R. (Scranton is to the left) and the faint line just beyond the railroad is the old Drinker Turnpike. The loaded track crossed the mountain that forms the horizon considerably to the right of this view.

Original photograph by Hensel.

Copy by E. P. Hulbert.



folks. The gravity trackage from Moosic skirted Scranton east of the Nativity section then referred to as "Shanty Hill" to get to Plane 5 in South Scranton. Running along the rim of the Moosic Mountains to Interstate Highway 81 the Gravity entered Dunmore's Number 6. Then it followed the contour of the land and the mountains to Number 7 at the reservoir situated to the left of the Drinker Highway (where the new Holiday Inn is located). It began its gradual climb up the Moosic Mountains — a rise of 800 feet in eight miles — to Cortez, Hoadley's and on into Hawley and Number 12, the last plane on the loaded tracks.

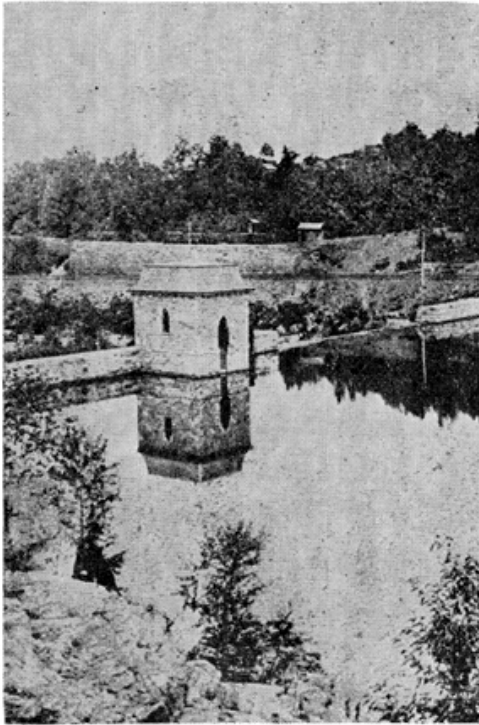
LIGHT TRACKS. Empty cars moved and returned to Pittston via a completely different set of tracks. The "light tracks" — trackage for the return of empties — made it possible for the "carmen" to link as many as eight cars together to ascend a returning plane since they were so much lighter when empty. Thus a "trip" on the light tracks consisted of eight empty coal cars as opposed to a "trip" on the loaded tracks which consisted of only five loaded cars.

The light tracks began in Hawley at Plane 13 and ran on descending tracks through to Number 22 in Pittston. This return trip of 47.02 miles consisted of a total of ten planes. Planes 13 through 18 out of Hawley were close together and the levels between them short. The foot of Number 19 was only 11 miles from Hawley in a direct line. Yet, it took six hoists to get there. Between Plane 19 (presently known as Lake Ariel) and 20 near Saco and on to 21 (Wimmers) the planes were at moderately long levels. Number 19 ran up the hill in front of the Catholic Church. The level from Number 19 to 20 ran through Tresslerville and on past Beyeas Pond (now Fernwood Lake). The head of Plane 21 (Wimmers) was considered to be the summit of the light track — 1,800 feet — and from there the empties had the longest coast of all — twenty miles to the foot of Plane 22 in Pittston.

Whenever a light trip from Hawley reached Bunker Hill in Dunmore that crew turned its train over to a new three man force who in turn took the light trip on down to Pittston. The Hawley crew then walked across to Number 6's loaded track where they picked up a train of coal cars to be taken on to Hawley.

The light track which ran out of Number 6 in Dunmore and on down to Port Griffith can be traced where it ran along the roadbed which until recently was owned by the Erie, just above Rocky Glen and down as far as Starks Bridge at the upper end of Moosic. Where the Erie Railroad ran into its own yards, however, the Gravity continued on and ran parallel to the D&H tracks on the Avoca side down into the basin at the West Side Ballpark at the foot of Plane 22, Avoca. From Plane 22 the light cars were hoisted to the top of Packer Street. Continuing downward the tracks skirted the Laurel Line viaduct at Dupont, moved along the hill to the old North Pittston Laurel Line Station through Browntown, and past the Pittston Cemetery where it connected with the loaded track at Number 7 Junction where the basin was situated. The empties were then filled with mined coal and began their journey back up the mountains to Dunmore and Hawley.

For a more technical and graphic view of the actual Gravity routes both to and from Hawley see Appendices II and III. Appendix III is an exact reproduction of the original P. C. Co. Road's blueprint, courtesy of the author's cousin Thomas J. Harrington, District Engineer of the Pennsylvania Department of Transportation.



FOOT OF NUMBER SEVEN PLANE SEEN ACROSS THE SCRANTON WATER WORKS

If you look carefully you will see that there is a trip of five loaded coal cars waiting to be hoisted. This picture establishes the exact location of the foot of Number Seven, just abreast of the gate house at Number Seven Reservoir of the Scranton Gas and Water Co.

Original photograph by Hensel.

Copy lent by E. J. Woodward.

Recopied by E. P. Hulbert.

LOOKING UP NUMBER 7 PLANE

Number 7 was the only plane that had a curve in it, all the others were straight. To take the side pull of the plane rope there had to be special pulleys with one high flange on each, and the standards that carried them were braced as appears in the picture; the bridge is where the Winton branch of the D.L.&W. crossed the plane.

Original photographs by Hensel. Copy by E. P. Hulbert.



RANDOM NOTES concerning the planes and levels

Plane Nos.

Plane 1 — Port Griffith, the first plane on the loaded track.

Plane 2 — Pittston, the second plane this side of Port Griffith.

Plane 3 — Avoca, known then as Pleasant Valley.

Plane 4 — Moosic, ran near Rocky Glen which is still referred to as No. 4.

Plane 5 — South Scranton, once known as "Shanty Hill" was near Connell Junction.

Plane 6 — Dunmore, the foot of which was right under the DL&W Railroad track near "Bunker Hill." The Main offices of the Company were located here at Mill and Chestnut Streets until 1965.

Plane 7 — Dunmore, on "Sport Hill", the only Plane with a curve in it, was located in the area of the new Holiday Inn of Drinker Highway.

Plane 8 — Dunmore, was the site of the "traps" that were used at the head of the plane to prevent cars rolling back down a plane.

Plane 9 — Dunmore, was the second plane constructed on the back of the Moosic Mountains.

Plane 10 — Dunmore, only three quarters of a mile from Number 9.

Plane 11 — partially located in Dunmore, the remainder, in present day Jefferson Township. Just beyond the summit of Number 11, the "trips" were assembled into long trains of forty or more cars. Shortly after the track began its downward grade, it passed through a tunnel 755 feet long, the only one on the Gravity road.

Plane 12 — Hawley, the longest Gravity run on the loaded track — from Number 11 to Number 12, a distance of fourteen miles. This plane was sometimes called 'Gravity' in Wayne County. From the highest point on Plane 12, the trains ran on down into Hawley to their connection with the canal.

Plane 13 — Hawley, the first plane on the light track and situated on the right bank of the Lackawaxen River. This track reached its highest point at the top of Plane 21 near Wimmers and from there started a down-grade run of 20.7 miles to Avoca and Plane 22. Planes 13 through 18 out of Hawley were close together and the levels between them short. From this plane to Number 19 was a fifteen mile run.

Planes 14 - 18 — located in and around the Hawley area.

Plane 19 — Lake Ariel, in front of the Catholic Church. In those days it was referred to as Jones Lake. This is the only point at which it was possible to transfer from the loaded track to the light. A trip of coal cars could easily be guided down the grade, unloaded and the empties returned without much fuss. Between Numbers 19 and 20, returning from Hawley the empties had their longest coast — twenty-two miles to Number 22 in Avoca.

Plane 20 — situated near Saco.

Plane 21 — Wimmers.

Plane 22 — Avoca.

The first man who ran a train of coal cars over the Gravity from Dunmore to Hawley was Dudley "Dud" Watrous. Dave Frost and Pointer Decker acted as his two assistants. Their train originated in Dunmore and consisted of twelve cars. (16) Another edition of the same local paper, however, stated that John B. Smith was also on the first run. According to its version of the story, the train left Dunmore at about 2:00 a.m. and didn't arrive in Hawley until 8:30 p.m. that evening. When the three man crew did arrive they were taken to the local hotel where the people of Hawley treated them to all they could eat and drink. Later that same evening to further celebrate the opening of the P. C. Co. R.R., the men were entertained by both a dog fight and a prize fight. (17)

Edward and Charley Burtcher ran the first train from Hawley on the light track in the latter part of May and their train was made up of twenty-two cars. (18)

It is interesting to note in local railroad history that during the time of the Gravity a hamlet, settlement, or town did not have any other name but the number of the plane. If one lived at or was going to Jones Lake (today Lake Ariel) he was going to Number 19 by name and not Jones Lake. This same rule applied but in the reverse for trains. Numbers referred only to planes and trains were not known by numbers but by names. A train belonged to the headrunner and therefore was known by his name viz — Michael Loughney's train.

(16) The Scranton Times, September 1, 1917, p. 5.

(17) The Scranton Times, September 3, 1904, p. 5.

(18) The Scranton Times, September 1, 1917, p. 5.

Chapter 3

CARS

The P. C. Co. cars (smaller than the Erie Railroad cars) were ten and one half feet long and three and one half feet wide — an oblong box — capable of transporting between three and one half to five tons of coal. The body of the car rested on two four-wheeled trucks inside the wheels and was securely connected to the frame by cast iron plates which were coupled to the body and truck frames by spikes — one in the frame, the other in the bottom of the body. A single link and hook on the other end allowed the runner to link or hook the trips together to form or make up the lengthy trains known to run then.

According to the article, "Old Gravity Railroad Started Anthracite Coal to Market" which appeared in the L. E. Journal in March of 1958, the wheels of the cars were open and loose on axles held in place by a collar forged on the axles. About four inches of both ends of the axles were lathe-worked perfectly smooth, and rested into a half round piece of brass, fastened to the underside of the truck frame. Positioned approximately every four miles along the tracks were grease or oil pans containing brushes attached to either end of an iron rod held in place by springs. The rod was long enough to strike the axles, dip the brush into the oil, fly back and strike the "brassoor," the part of the axle bearing on it.

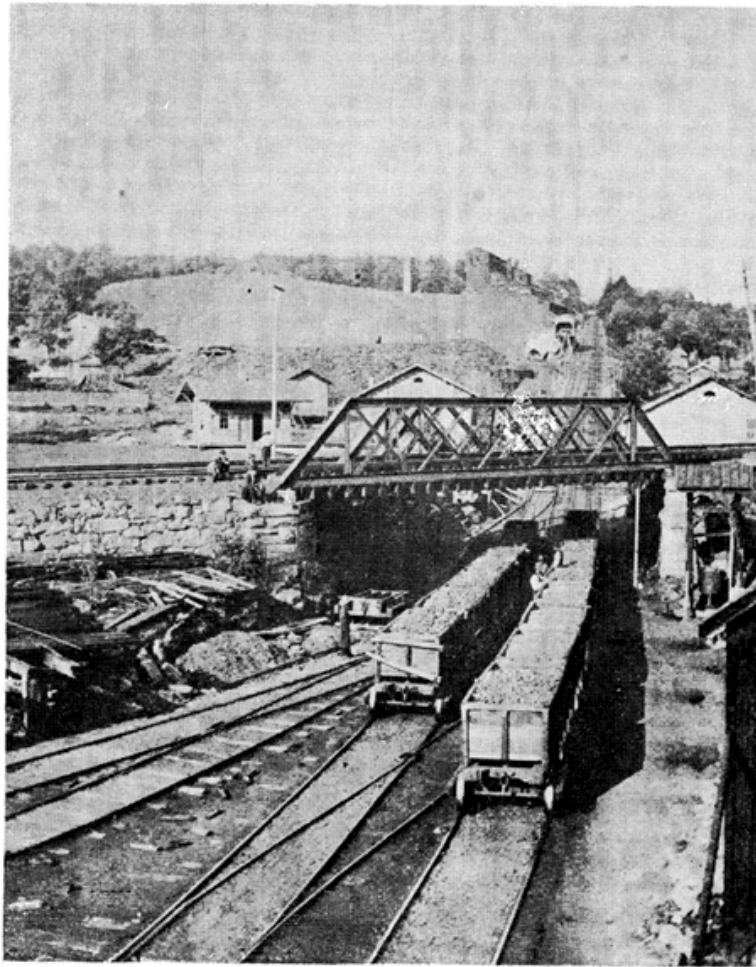
When a train had to stop, everyone worked the brakes, a series of levers containing ratchets on the outside of the cars. The brakes could be forced on by standing on the levers, and the ratchets held them in place. Not every car had brakes, but cars without them were controlled by the use of "sprags" or "puddle sticks" shaped like a potato masher and jammed in between the wheel and the frame of the truck. The sprags had a hole in their small end through which the crewmen ran a wire with which to carry them. The rear brake lever mentioned is accented in the photos contained on the following page.

The P. C. Co. R.R. had over nine hundred coal cars in operation besides passenger and flatcars for moving other commodities, and at the rate of six to eight cars per day that number was increased as a result of construction at the Hawley car shops.

"After weighing the cars they were hauled to the road crossing by an old calico horse in charge of Daddy Shelp, a distance of probably three hundred feet on the main track and when the track was filled with loaded cars to the rear end coal pockets, an engine would be attached and the loaded cars drawn slowly over the scales, each car being weighed as it passed, the weight and size of coal announced by the weighmaster and a book record made by the clerk, who would also get the car number. When such weighing was completed, the cars would be billed or manifested to whomever and wheresoever orders were to be filled." (19)

This description of the routine procedure at the Hawley scales and pockets notes the thoroughness with which the Gravity kept its records or manifests.

(19) McAndrew, pp. 40-41.

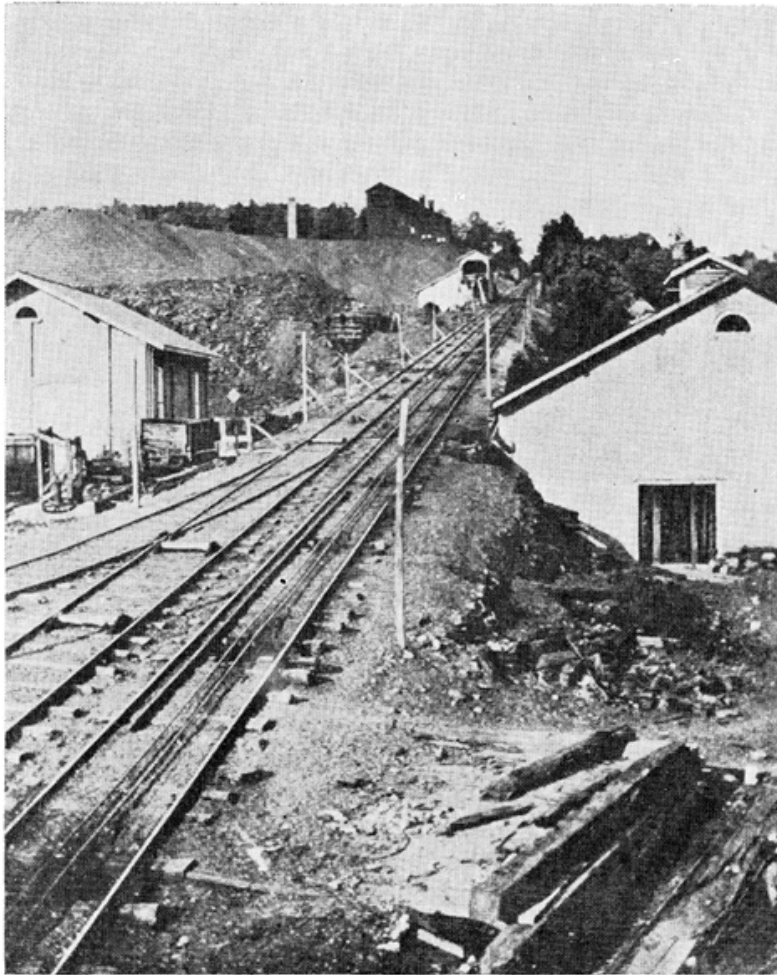


FOOT OF NUMBER SIX PLANE AT DUNMORE.

The bridge is on the D.L.&W.R.R., toward the right is toward New York. The little building across the D.L.&W. is the Number Six passenger station. The breaker is served by this plane as is also the small structure just below it, the coal pockets for retail sales. At the right center of the picture is the counterbalance tower that took up the slack in the endless hoist rope on the right hand plane. Number Six was a double plane. The coal cars are waiting to be hoisted, more cars will come in up the loaded tracks in the foreground. Under the railroad bridge, to the left, is the "balance car" the use of which will be explained later. The slanting bar on the rear of one of the coal cars is the lever by which the brakes were operated. There was a system of further levers on the side of the cars that put additional pressure on the brake shoes.

Original photograph by Hensel.

Copy by E. P. Hulbert.



NUMBER SIX PLANE, JUST BEYOND THE FOOT.

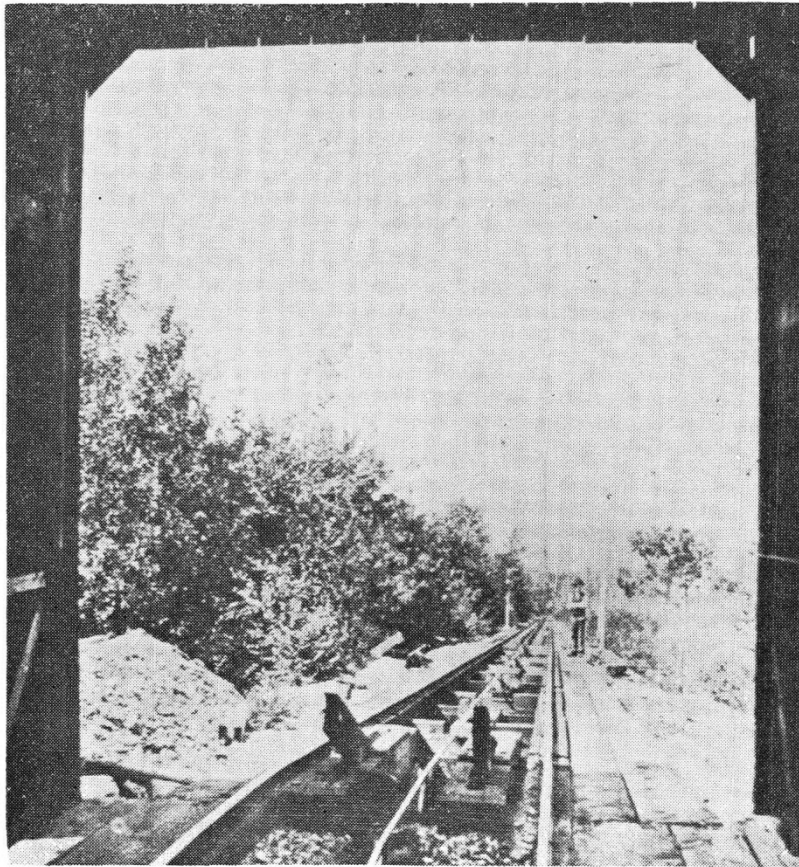
Cars could not be switched to a regular plane between the foot and the head, the wheels could not pass over the plane rope. Number Six plane had to serve the breaker, the coal pockets and the passenger track, the one that comes in from the left of the picture. To do this it had to be of special type, with only a simple rope to which the heavy balance car, shown in another picture was attached. This could be lowered and switched to whatever track was necessary, coupled to its load and hoisted. Note the long rollers on the left hand plane that allowed this switching. As that sort of a plane was wastefully slow in operation Number Six was a double plane; the tracks on the right were of the customary endless rope type, those on the left the special balance plan.

Photograph taken from the D.L.&W. bridge.

Original photograph by Hensel.

Copy by E. P. Hulbert.

At the head of every plane there was a pair of "dogs" — heavy timbers pivoting between the rails. The cars going up the plane pressed the dogs down as they passed over them. Nothing could slide back down the grade once it had passed that point because the dogs lifted after each pair of axles went over them and if the cars tried to slide back down the timbers caught an axle and stopped the trip. See photo below. Every trip that went up a plane went over the head on its own momentum because if the stationary engine pulled it over, the trip would be going too fast for safe uncoupling. Therefore, the engineer was notified by signal as to when the first car cleared the dogs and he would then shut off the power. This momentum brought the rest of the cars up over the head slowly enough for the headman to loosen the sling from the plane rope.



VIEW DOWN NUMBER EIGHT PLANE

Taken from inside the head house. This shows the traps at the head of the plane, that prevented cars from rolling back down the plane. There appears to be only one plane rope but there are really the usual two. The return rope is in the pit under the track coming back to the plane from the drum of the hoisting engine.

Original photograph by Hensel.

Copy by E. P. Hulbert.

Chapter 4

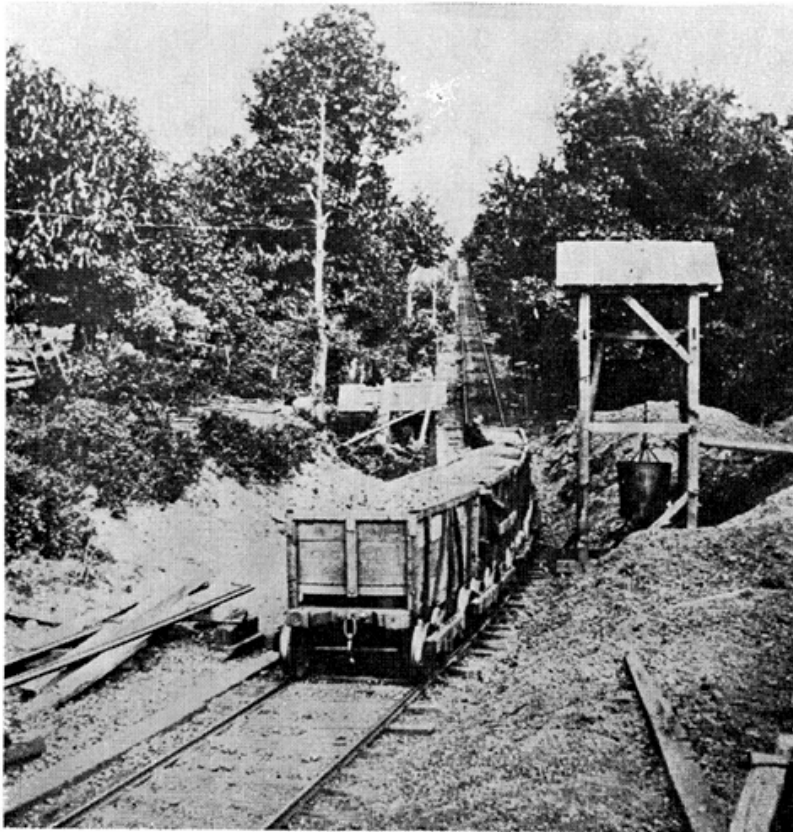
CREWS

Different train crews handled the Gravity trains running between Port Griffith and Dunmore and from Dunmore on to Hawley. The loaded coal cars started from the mines around Pittston and were sent as far as the head of Number 2 by crews whose duties allowed them to go no further. From there to Number 6 in Dunmore the train was handled in small groups, each with one man in charge and each man making two round trips a day. Sixteen runners made two trips a day which meant thirty-two trains a day — more than one train every half hour.

Wherever the runner started in the morning on the lower division (the run from Pittston to Dunmore), when he reached Dunmore's Number 6 with his full train he'd leave it and walk the steep path up the side of the mountain above Number 6 to the light track, a transfer point known then and now as "Bunker Hill". From Bunker Hill on the light track the Pittston runners then made a return run with empties to the last plane on the light track — Number 22 in Avoca. After returning the empties, these same men then proceeded to walk to the head of Number 2 for another "trip" of loaded cars bound for Dunmore. The dispatcher for years at Number 2 was Philander Moon.

There were twenty train crews employed on the loaded track run from Number 6 to Hawley. Each crew, which was made up of three men, had a head runner in charge who rode the rear and kept a record of the number of cars brought to Hawley and saw to it that as many empties returned to Pittston from Hawley. Since it wasn't always possible for the runners to return to Dunmore or Pittston the same number of empty cars they'd delivered full, a free return arrangement was worked out which saved arguments. Each headrunner was also responsible for the safe speed of the trains. The other two runners or assistants helped in the handling of the trips up the planes and they rode one on the lead car and the other in the middle of the train. All runners rode only cars with good brakes. These runners were paid a flat rate for all loaded cars — \$1.00 per day and a day consisted of a round trip. There were footmen stationed at each plane and a headman at many of them. When the train arrived at the head of a plane it was broken up into "trips" — a group of five loaded cars. The runner went up with the first trip to handle things at the head and the footman continued to send up trips one after the other until the full train was up and coupled together. The trips were hoisted up the planes by a "sling" — a chain four feet long made of inch iron and having a hook on both ends. Each trip was supplied with a sling. One hook on the sling was attached to the coal cars while the other end of the sling was fastened to the cone in the cable. Once a trip was securely hooked, the engineer applied the power of the stationary three cylinder engine and the trip was hoisted. As the first car reached the top of the plane an automatic signal notified the engineer. Since the cable by this time was slowed down, the headman or runner could with his right hand catch the hook that was in the car, and as soon as there was enough slack loosen it from the car. Then, giving it sort of a half twist which threw the other hook from the cone, he would step out of the way of the cars, give the chain a throw that would raise it in the air, catch the second hook with his left hand and throw both on a cleat which was nailed on the side of the coal cars to receive them. As each trip was hoisted to the top of a plane, it was held there until the full train arrived. The brakeman then took charge and the whole

train would start coasting downhill to the next basin and up another plane by means of the same operation. Sometime after 1869, "traps" were placed along the planes to stop any runaway by derailing the trip before it could gather speed. The derailing device on the planes was not the only ingenious device employed by the Gravity. In order to keep the endless cable tight over the pulleys and sheaves, there was a counter balance tower built at each plane. The tower was a short squat structure which looked very much like a covered well. An extremely heavy weight hung in the tower and this weight connected with the final sheave around which the plane rope ran at the foot of the plane and so took up any slack due to stretching, or contraction of the rope due to changes in the temperature. Photo 7 is a pictorial illustration of this explanation.



VIEW UP NUMBER NINE PLANE

Number Nine was the second plane up the mountain back of Dunmore. This shows the five car trip that was the usual number to hoist at one time up the planes on the loaded track. The counterbalance tower and its weight shows at the right.

Original photograph by Hensel.

Copy lent by E. J. Woodward.

Recopied by E. P. Hulbert.

The Gravity ran six days a week — 6 a.m. to sunset — and a day's work ended only when the crew finished a round trip which usually took between ten and twelve hours.

Generally speaking the crews lived along the Gravity line and at night stopped their trains where they lived and the headrunner chained it to the track. The practice of chaining the train to the tracks was verified by C. B. Watrous concerning evening retirement of trains on the upper division but he did not comment on practices of the lower division. These cars, it is to be noted, were not run in on any sidings overnight — they were stopped and parked on the main line. If the crewmen stopped the train from the rear so that all the couplings were stretched light and there was an interval between the cars, then in the morning it was easier to get started since each car that was freed gave a little bump to the car ahead thus making the start quicker. This was a big help when the wheels of the cars froze to the rails overnight in the winter months. At no time were Gravity trains run at night.

The roadbed over the mountains was kept open in the winter for as long as possible. When snowfalls were light, the crews hand-shoveled the roadbed or used two stiff brooms fastened to the lead car in order to sweep the rails clean. Since there was plenty of power in a full train running down hill, this system worked out well. The winter run was rough and the runners had no protection from the weather. In the early days of the Gravity when the canal froze, the P. C. Co. was forced to close down for almost two months every winter and this practice halted coal shipments. Aside from this natural stoppage of the Gravity's run, only one other major interruption ever halted regular winter hauling. The coal strike of 1869 in Lackawanna Valley prohibited operation of the railroad from November of that year to April of the following year when the strike was ended. The P. C. Co. made good use of this time off, however, by hiring Seldon Brady to "get out ties on the Aaron Silkman tract", under the supervision of William Oxenreider, in charge of the track laying crew, so standard steel T-rail could be laid. The old strap rail was outdated for the ever increasing railroad business. About 40 pounds of yard T-rail was used on the loaded track and 35 pounds on the light track. (20)

After the Gravity began shipping its coal by way of the Erie Railroad from Hawley, it was able to function in both winter and summer.

It is interesting to note that the fathers of three Catholic bishops were employed by the P. C. Co. Patrick Hoban constructed several sections of the Gravity and later obtained the contract for storing coal at Hawley. His son Right Reverend Michael J. Hoban became Bishop of the Scranton Diocese. Michael Garvey, boss "roperigger" on the loaded track, had a son Right Reverend Eugene A. Garvey who became Bishop of the Altoona Diocese also in Pennsylvania. William J. Kenny whose father Patrick was employed at the coal works in Hawley became Bishop of the Saint Augustine Diocese in Florida. (21)

The next several pages contain the names of many of the men who worked on the Gravity. The late James O'Connor, former Scranton Times Staff-Writer compiled and published a list in September of 1914. That list together with a list found in McAndrew's "History of Hawley" were combined on the following pages.

(20) The Scranton Times, September 2, 1933, p. 5.

(21) The Scranton Times, September 1, 1917, p. 5.

SUPERINTENDENTS

William R. Maffett, John B. Smith

ASSISTANT SUPERINTENDENT

George Smith

MASTER MECHANICS

John B. Smith, Butler, Dwight Miller

DISPATCHERS

No. 2 — Philander Moon

No. 6 — John Maloney, James J. Healey

Bunker Hill — Issac Brady, Byron Brady

TELEGRAPH OPERATORS

Pittston — Homer Greene, William Teeter, A. M. Bingham

Avoca — C. C. Bowman, J. T. Fear

Dunmore — George B. Smith, John Raught, Charles P. Savage

Hawley — Monroe Thorpe, Elmer E. Vicker

No. 19 — Mrs. Susan Sandercock

WATER WHEEL RUNNERS

No. 6 — John Mason

No. 14 — Charles P. Hand, W. J. Hand

No. 15 — Jacob Ames, Reuben Ames, Ezra Swingle

ENGINEERS

No. 1 — Moses Belles, John Banks

No. 2 — Daniel Roberts, Robert Westlake, Albert Jenkins, Isaac Butler

No. 3 — Charles Stewart, Daniel, William Stanton, William Weber

No. 4 — William Green, Samuel, Michael Grattan, Lafayette Decker

No. 5 — John Mack, Ulysees Campbell, William Seigel

No. 6 — Alonzo Ellis, Charles Bradley, William Stanton, John Rice, Ellijah Shafer

No. 6½ — Jeremiah Sheer, John Tigues, John Harper

No. 7 — John Ames, William Clark, Patrick Grattan, Michael Bulger, Asher Butler, William Harper

No. 8 — Whitmore, John Jones, Butler, William Snyder, William Morgan, Hugh Donnelly

No. 9 — Norman Miller, Moses Curtis, Nathaniel Richards, John H. Smith, Sidney Chivers, James Ellis, John Carney, Edward Fitzpatrick

No. 10 — John Jones, Daniel Hull, Nathaniel Richards, William Morgan, John Carney, Isaac Smith

- No. 11 — Joseph Holbert, Robert Westlake, Thomas Randell, Ulysses Campbell, John Butler, Richard Harvey, William Young
- No. 12 — William Green, Reuben Ames, James Bigart, John Butler, Barton Swingle, Roger Davis
- No. 13 — William Chamber, Byron Davis, William Mills, William Bigart
- No. 14 — John Bigart, William Bigart, Byron Davis
- No. 15 — Jacob Ames, Ezra Swingle, Charles Brower, Lorin Davis
- No. 16 — John Scragg, Patrick Brown, William Hand, William Bidwell, Oscar Davis
- No. 17 — Charles Harding, Patrick O'Hara, Enoch Mathewson, James Bigart, Abram Kirby
- No. 18 — Charles Bradley, Samuel Elston, William Angell, Thomas Nicholls
- No. 19 — Giles Greene, Louis Laubscher, Charles E. Mills, William Hand
- No. 20 — George Brown, Louis Laubscher, Barton Swingle, David Mann
- No. 21 — William Brown, James Brown
- No. 22 — John Mitchell

FIREMEN

- No. 6 — Brasilla Little
- No. 7 — Timothy Garvey, James Corcoran, Murphy
- No. 8 — Evan Thomas, Thomas Cavanaugh
- No. 9 — Louis Marsh, Jeremiah Sheer
- No. 10 — John Murphy, Thomas O'Malley, Edward Miller, James Riley
- No. 11 — Jacob Plechor, Daniel Price, Thomas
- No. 12 — Robert Price, Henry Lennis, Roger (), Seldon Shelk
- No. 13 — John Ward, Cornelius Roche
- No. 14 — Frank Mills
- No. 15 — Luther Foster
- No. 16 — Cornelius Roche, John Ward, Daniel Winsfield, Patrick Gallagher, Herschel Smith, John Spangenburg
- No. 17 — John Van Auken, Michael O'Hara, Frank Chapman, Lorin Davis, David Mann, Frank Shelk
- No. 18 — John O'Connor, Emory Jones
- No. 19 — Patrick Brown, William Turner, Byron, Evastus Hedgelon
- No. 20 — Samuel Treible, Sampson
- No. 21 — William Black, John Malia, Fisher

CAR RUNNERS

- No. 1 — Norman Lampman, Michael Gannon, William Banks, William Hobbs
- No. 2 — John Walsh, Thomas English, Charles Madison, Charles Croop, David Davis
- No. 3 — James Gilmartin, Michael Flynn, Andrew Decker, John Miller, Moses Belles, Chauncy Decker, Norman Belles, Lafayette Decker, Smallwood

- No. 5 — John Clifford, Jacob E. Shafer, John Conway, William Weber
- No. 6 — (Lower end) Warren Coon, Ziba Mott, James Masters, Scott Watrous, Richard Howard, John I. Coon, John Wagner, William (), John Spences
- No. 6 — (Upper end) Milton Decker, John Parker, George Greenslit, Edward Quinn, Edward Secor, Frank Secor, John Beavers, Hobbs, Albert Newton, Byron Mott, Warren Grant, Eber Branning, Thomas Duffy, David Brink, Thomas Roche
- No. 6 — Henry Conn, Washington Spangenburg, Charles Elston, William Brundage, Eugene Tresslar
- No. 6 — (Engine Coal) George Newton, Thadeus Boland, Michael Rooney, Patrick Doudican
- No. 9 — William Ocksenreader, John Snook, Henry Snook, Allen Secor Jr., Michael Malia, Watson Swingle, Philander Moon, James Black
- No. 11 — William Biesecker, Wells Benjamin, Charles Benjamin, Robert Miller, Henry Haines, Fred Spangenburg, Fred Brundage, John Haines
- No. 11 — (Level) James Burns, John Collins, Henry House, Louis Spangenburg, Elijah Swingle, Jasper Kiser, Alden Hammond, Emory Swingle, Robert House, Joseph Cobb, Merritt Swingle, Finley Swingle, Leander Swingle
- No. 11 — (Level) Columbus Hubbard, William Hammond, F. M. Gaylord, Joseph Stevens, Albert Shafer, Alson Hammond, Jeremiah Swingle
- Last No. 12 — Daniel Buckland, James Dowd, Sammy Warren, Swingle, Abram Shafer, Abram Swingle, John Miller, Samuel McLane
- First No. 12 — Samuel Hetzel, Peter Hetzel, John Hefler, George Shafer, George Correll, James Swingle, William Correll, Tillman Shafer, John Correll, Q. M. Curtis
- No. 12 — (Level) John Shampson, Hayden Sampson, Gilbert Spangenburg, Mervin Correll, Isaac Male
- Third Hawley — Stuart Snyder, Jehiel Nicholson, Thomas Finan, James Compton, Louis Spall, Roy Nicholson, John E. Roche, Milton Turner
- Second Hawley — Frank Enslia, Cornelius Shafer, George Turner, Victor Stone, George Teeter, Oscar Kirby, Oscar Stone, Michael Murphy
- First Hawley — Abram Kirby, Henry Hull, Merritt Turner, John Mitchell, Michael Brown, Henry Vaughn, David Bishop, James Vandermark, Wesley Van Gorder, William Sampson, Elias Turner, John Van Camp
- No. 16 — Joseph Stevens, William Ammerman, Jacob Snook, Lafayette Spangenburg, William Spangenburg, Hayden Sampson, Robert McStraw, Roy Nicholson, William Curtis
- No. 17 — John Hawk, Louis Arnold, Alman Wheeler, Clayton Spangenburg, John Mitchell, Morris Knapp, Earl Bishop, Frank Chivers, Oliver Clark, Orrin Correll, Wallace Woodward
- No. 18 — Alson Vandervoort, Jacob Curtis, Lafayette Burleigh, Lyman Swingle, Sylvester Wheeler, Warren Moore, Samuel Evarts, DeWitt Reed, John Waters, Frank Chivers, Martin Carroll
- No. 19 Second — John Diltz, Henry Vaughan, Albert Sheldon, Salmon Jones, Abram Swingle, Frank Swingle, Charles Fowler

- No. 19 First — Peter Hetzel, Henry Vaughn, Albert Sheldon, George Foote, Alexander Correll, George E. Evarts, Henry House, Thomas Sandercock
- No. 20 — Henry Masters, Orlando Brown, Samuel Boerem, William Masters, Theodore Polhamus, Arthur Masters, James Masters, Jr.
- No. 21— Dudley Waters, David Frost, Jacob Rosencrans, Joseph Croop, John Waters, Gabriel Brown, David Coon, Daniel Winfield, Ellas Black, James Black, John Henry, John Van Gorder, James Alson Secor, James Dowd, James Van Gorder, **Michael Loughney**, Victor Stone, Reuben Ferris, Louis Jones
- No. 22 — George Croop, George Lampman, Mahlon Casterline, Theodore Smith, William Sanders, William Tinklepaugh, Daniel Smith

CONDUCTORS OF THE PIONEER

Josea Carpenter, Robert Headley, Robert Arnold, Chester Potter, John Brink, Peter Siegel, Charles Elston

TRAINMEN ON PIONEER

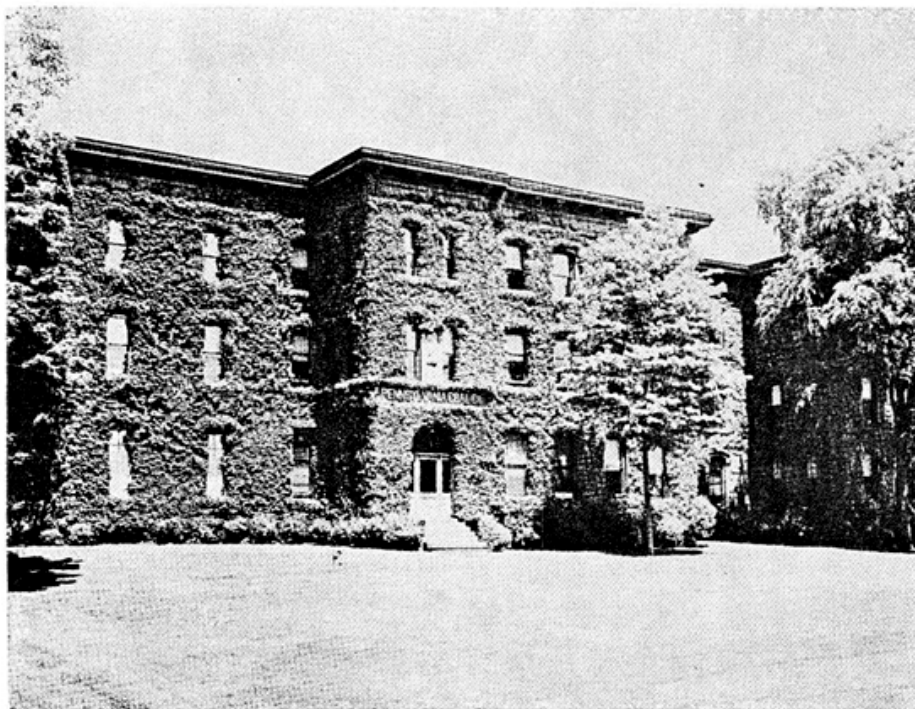
Michael Coughlin, Warren Fay, Butler Mitchell, Edward Ocksenreader, Louis Drop, Henry Brink, Sidney Shafer, James Fitzpatrick

TRUCK RUNNERS

- Dunmore — Allen Secor, A. C. Snyder, John Beavers, Lester, Sidney Shafer, James Hallock, William Townsend, Bunnell Washer, John Hobbs, John Maloney, Mahlon Hobbs
- Hawley — Louis Spall, DeWitt Reed, John F. Curran, Adam Stilts
- No. 21 — Andrew Hedgelon, Morris Hedgelon, Rhodes Berry, Michael Simons, Jacob McQuah, Charles Lown
- No. 12 Branch — Dennis Wetherill

ROPE RIGGERS

Michael Garvey, Charles Carroll McGuire, Patrick A. O'Hara, Bryan O'Hara, Patrick Hennigan, Frank Sanders, Peter O'Donnell, John Gribben, James Garvey, John Bigart



**PENNSYLVANIA COAL COMPANY MAIN OFFICE, AS IT APPEARED
DECEMBER 15, 1965 AT THE TIME OF CLOSING**

Chapter 5

PASSENGER AND FREIGHT TRAINS

As had been mentioned in the Introduction, passenger and freight service was begun under the aegis of John B. Smith, General Manager of the P. C. Co. In the late fall of 1850 the first run of the "Pioneer", the Gravity passenger train, was made with Hosea Carpenter its conductor. (22) Passenger train service only existed between Scranton and Hawley with customers boarding and leaving the cars at a point near present day Nay Aug Park known as "The Latches". A "Pioneer" was capable of carrying about twenty persons. Its seats, which ran lengthwise like present day subway cars, were made of pine and arched roof. Lighted by a pair of oil lamps, these cars were heated by a coal stove. Each car had a brakewheel on one end of its platforms and the car often was weighted with iron to make better speed. The passenger trains according to "The Pennsylvania Story" had a baggage car in the front and a smoker and coach in the rear. Two "Pioneer" trains made round trips daily except on Sundays. One left Dunmore about 8:30 a.m. and the other left Hawley at about 3:30 p.m. The fare was one dollar and to go from terminal to terminal took about an hour and a half to two.

People were able to get from Scranton to Number 6 in Dunmore via a train pulled first by mules and later by a steam engine. The fare to get from Scranton to Dunmore was \$.10 and the passengers were carried to Dunmore where they changed cars and boarded "Pioneers" for the points north or east of Dunmore. Hulbert described a street car ride from Scranton to Dunmore noting the exact route taken in 1884 when he made a round trip a year before the Gravity was abandoned. According to his recollection, the streetcar ran up Lackawanna Avenue past the Lackawanna Iron and Coal Company's Store at the corner of Jefferson Avenue; rode one block of Jefferson and then changed route by slanting across to Madison Avenue at Olive Street. There was a reservoir where the Westminster Presbyterian Church now stands and at this point the streetcar wandered off across the fields, turning up Pine Street to Quincy Avenue before starting its diagonal climb up the hillside which ultimately brought the car to the passenger transfer point where the Erie Railroad Bridge now stands at South Blakely Street in Dunmore. From Number 6 in Dunmore the passengers were then taken to any destination they chose between Number 6 and Number 12 the end of the line—Hawley on the loaded track. Many a person or family who boarded the "Pioneer" at Number 6 were on their way to Number 19 (Jones Lake, today's Lake Ariel) for a day's outing or church social. To get to Number 19 on the light track, the "Pioneer" left Dunmore travelled the loaded track to the head of Number 12 and from there dropped down the crossover to Plane 19 which was on the light track. Passengers from Hawley were taken as far as "The Latches", which were a bit beyond Number 6 and situated about where the present Daleville-Pocono Highway goes under the Erie Railroad Bridge at the upper end of Moosic Street to date. Robert Headley was the first conductor of the Hawley passenger train and his brakeman was James Fitzpatrick. Charles Potter then ran the train for a number of years with his successor, conductor John Brink remaining until the Gravity was abandoned in 1885. Peter Siegal was in charge of the other passenger train and later was succeeded by Charles Elston who also remained until the railroad shutdown.

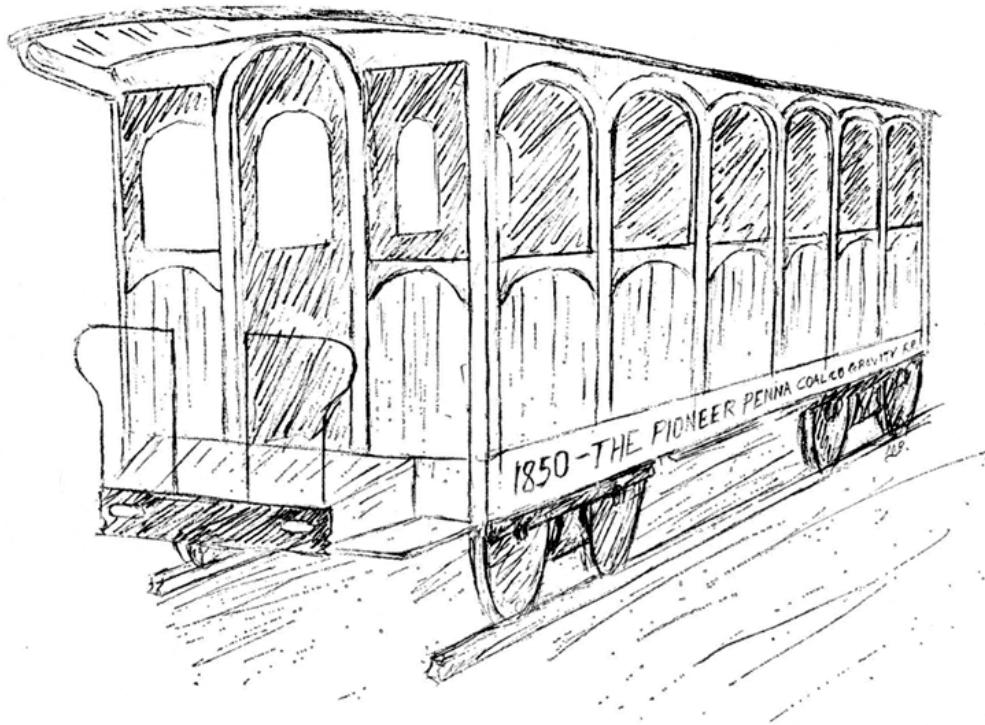
(22) The Scranton Times, September 4, 1911, p. 12.

Eber Branning, a Number 6 engineer, made the last and special trip with the passenger train in 1885. As the story goes, a group of John B. Smith's personal friends wished to be taken to Number 19 (Lake Ariel) but the ropes had by this time been taken from the engine at this place. Smith ordered that the rope be put back on the engine and that Eber Branning make the run with the three carloads of passengers. (23) The photo on the following page is a hands sketch of the Pioneer car that is on exhibition at Nay Aug Park at present.

Gravity freight train service proved to be invaluable to the newly developed towns and settlements along the route, and this fact is more keenly appreciated after one browses over a monthly "Manifest". It then is quite evident that private families, general stores, distributors and the iron and steel firms made excellent use of the line to have furniture, drygoods, foodstuffs, beverages, and construction materials delivered. For example, the firm of Scranton & Platt shipped its first consignment of rails to the Erie Railroad on June 25, 1850 and later used the line for shipping ore and other supplies between Scranton and Pittston. Bob Headley was the first man to run a freight train over the Gravity road and this was from Port Griffith to Hawley. (24) The freight trains were made up of six or seven cars and were run once a day in the morning except on Sundays.

(23) Ibid.

(24) Ibid.



The Pioneer Passenger Car

1850

Chapter 6

THE END OF AN ERA

About 1880, talk of some import arose concerning the construction of a steam railroad from Hawley to the mines down the line. Members of both the Erie and the P. C. Co. met frequently over a two year period to discuss this matter. The chief advantage for building the proposed steam railroad was the elimination of transferring coal from the Gravity cars in Hawley to the Erie cars which then brought the coal to its markets. In the summer of 1882 operations for the steam railroad actually began and its route closely followed the line of the Gravity and in many instances ran side by side or in clear sight of the rails. Chief financial backing came from the P. C. Co. and the Erie Railroad with John B. Smith becoming its General Superintendent until his death in 1895. Several contractors were hired and work was pushed to completion so that in 1885 the roadbed was finished and the historic Gravity railroad was retired.

By 1884 it had been decided that the price of shipping coal over the mountains by Gravity was far too costly a practice to continue. In this same year the Erie and Wyoming Railroad decided to extend its lines into the city of Scranton. Hence, under the Presidency of George A. Hoyt the P. C. Co. R.R. was absorbed by the Erie and Wyoming Railroad in 1885 and the Gravity was soon abandoned; its forty-seven mile route being immediately replaced by locomotives.

Local newspapers kept a running account of the gradual abandonment. On May 22, 1885, the first steam passenger train made a trip from Hawley to Dunmore over the Erie and Wyoming Valley tracks. The Scranton Republican reported that by May 31, 1885 the bulk of coal was being shipped via the Erie and Wyoming Railroad. This same article then assured readers that the engineers of the plane stations would be provided with other positions when the Gravity was shutdown. By June 7, even though all the coal trains had been withdrawn from the Gravity road, the "Pioneer" train continued its service as usual until October 12. October 4, 1885 The Republican was informing the public that the Erie and Wyoming Valley Railroad would put into service a mixed train of passenger and freight by October 12, from Pittston to Hawley. John Brink, a former P. C. Co. R.R. conductor on the passenger train was to act as conductor of this new train. When the first regular passenger train service began (October 12) the Pioneer sent only one train a day on its old trackage and this only as far as the Number 12 crossover.

Eber Branning made the last and special trip of the Pioneer train to Number 19 (Lake Ariel) in the latter part of 1885. At this point the ropes had been removed from the engine on that plane but the excursionists must have been friends of Smith's because he ordered that the ropes be put back on and that Branning make the run. The train of only three carloads was taken over the roadbed to Number 19 for the last time.

Michael Loughney (25) had charge of the last train run on the loaded track of the P. C. Co. R.R. This run was made on Saturday, December 18, 1885 with Eddie Higgins and John Farley the two assistants. The train was made up of coal cars from Number 6 and Gypsy Grove. The three delivered the cars to Hawley that evening and remained there until Sunday evening when they rode home in the caboose of a coal train belonging to the Erie and Wyoming Valley Railroad.

Though the P. C. Co. was formally absorbed by the Erie and Wyoming Valley Railroad its dynasty continued until it was ultimately acquired by the Erie Railroad in 1901. In order to forestall building a new railroad to tidewater, the Erie Railroad (not to be confused with the Erie and Wyoming) bought the P. C. Co. and the Erie and Wyoming Valley Railroads in 1901 referring to the Erie and Wyoming section of it as its Wyoming Division of the Erie. Another change of hands took place in 1927 when the Pittston Coal Company was organized to take over the P. C. Co. and certain other coal interests of the Erie Railroad at the suggestion of the Van Swereign interest who were consolidating their business. Thus through a succession of ownerships the firm has been controlled by at least five separate companies. "The present Pennsylvania Coal Company is a reincorporation formed by the stockholders on March 8, 1895, and acknowledged March 19, and then filed with the Secretary of the State of Pennsylvania on April 17, 1895." (26)

While compiling data for the paper it came to this writer's attention that though there were numerous hair raising accidents on the Gravity, wondrously very few deaths occurred as a result of them or because of carelessness of crewmen. Abram B. Kirby and John F. Curran vividly described harrowing experiences while working the Gravity.

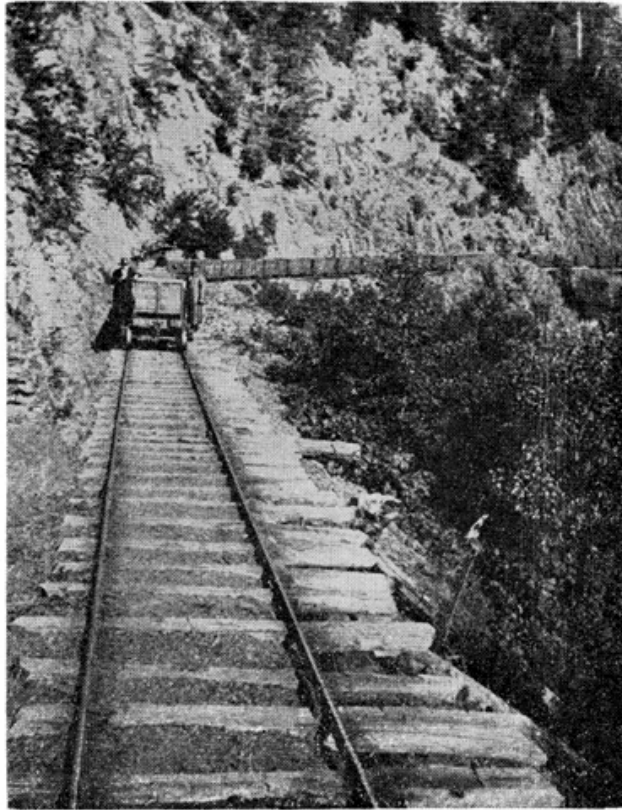
James O'Connor, in a Scranton Times article dated September 14, 1915, recorded some interesting, heroic, humorous, harrowing and even tragic incidents recalled by himself or former Gravity employees whom he cited. According to his article there were several long, high trusses (wooden trestles) on the loaded track between Numbers 11 and 12, and on the light track between Greenville (Nay Aug) and Bunker Hill. Just the sight of these two trusses struck fear into new and inexperienced riders. The largest truss was at McCoy's near Kizers (Cortez) and most Gravity men knew it well. In June of 1859, it fell under the weight of a train (approx. 45 cars) and George Shafer, a runner, was killed. Two other Gravity trains went over the Greenville truss killing Gilbert Spangenburg and Cornelius Shafer. Bradsby recorded the death of Robertson Baird in 1853 and that possibly because it was the first death to occur since the Gravity began operating.

For various reasons there has never been a book written about the Gravity. It may be noted that at one time A. C. Snyder anticipated having material he had gathered, published. Yet, he felt that during his lifetime it would be inopportune to do so. Unfortunately, today his notes have completely disappeared; vanished. Dayton Ellis, former Principal of Dunmore High School, also spent much time gathering material for a book on the Gravity but he too decided against publication and instead turned his notes over to the Lackawanna Historical Society.

Many questions must be left unanswered because no concrete history was ever preserved. Researchers have only scanty notes in societies, court litigations and hundreds of dated newspapers to wade through with much of their notes repetitious, contradictory or evasive. Nevertheless with what was available and in a sixteen month period, this writer tried to take a small step forward in preserving the history of a railroad and the end of an era.

(25) Mr. Michael Loughney was this author's great uncle and is responsible in an indirect way for the writer's interest in rails.

(26) Author Unknown, *THE PENNSYLVANIA STORY*, (Scranton: The Pennsylvania Coal Company, 1950) p. 27.



**LONG TRAIN OF EMPTIES ALONG THE
CLIFFS OPPOSITE GREENVILLE**

Greenville is now Nay Aug. The track in the foreground looks desperately unsafe, as if the ties were projecting over the edge unsupported. Really there is a stringer under them, and this in turn is supported by struts, almost like one side of a trestle. The train appears to be coming toward us, actually the grade is the other way and the train standing still.

Copy by E. P. Hulbert.

Original photograph by Hensel.

APPENDIX I

REPORT OF THE BOARD OF DIRECTORS OF THE PENNSYLVANIA COAL COMPANY, TO THE STOCKHOLDERS, MARCH 19, 1851

REPORT

of

THE BOARD OF DIRECTORS

of the

PENNSYLVANIA COAL COMPANY,

to the

STOCKHOLDERS

March 19, 1851

New York:
Printed by JOHN M. ELLIOTT
133 Water Street

MDCCCLI.

OFFICERS

of the

PENNSYLVANIA COAL COMPANY

DIRECTORS:

IRAD HAWLEY,

JOHN EWEN,

WILLIAM R. GRIFFITH,

DANIEL PARISH,

ISAAC L. PLATT,

WILLIAM F. HAVEMEYER,

WILLIAM H. FALLS,

MOSES TAYLOR,

ROBERT B. MINTURN

IRAD HAWLEY, President,

JOHN EWEN, Treasurer,

E. J. HAWLEY, Asst. Treasurer.

REPORT

Office of Pennsylvania Coal Company,
New York, March 19, 1851.

The Board of Directors, in submitting their reports to the stockholders, deem it proper to briefly advert to the origin and progress of the works of the Company. Anthracite coal, in great abundance, and of a very superior quality, was known to exist in the Wyoming Valley, in the vicinity of Pittston. No convenient mode of communication was formed between the centre of the Wyoming coal field and the New York market; the usual mode being by a circuitous route of about four hundred miles by the way of Havre de Grace, the Chesapeake and Delaware, and Delaware and Raritan canals, at a cost of transportation that would often exceed the value of coal. The coal from this region was consequently mined only to a limited extent, chiefly for the supply of foundries and rolling mills along the Susquehanna. The Delaware and Hudson Canal Company, having offered, as an inducement to the construction of another railroad connecting with their canal, to agree upon a permanent rate of toll with those who should engage in such an undertaking, an Association was formed with a view to opening, by means of such a railroad, the rich coal lands of the Wyoming Valley to the great Atlantic market, and entered into a contract with that company, and purchased lands for the purpose of mining and transporting coal to market by this channel. The Washington Coal Company, having authority to construct a railroad from the Delaware and Hudson Canal to an intermediate point, commenced such a work, but subsequently, under an act of the Legislature, became merged in the Pennsylvania Coal Company, which had authority to extend the road to Pittston, where their lands, as well as those of the Association, were situated. This company, having made an arrangement with the Association in respect to the transportation of coal under their contract with the Delaware and Hudson Canal Company, completed the railroad, equipped it, and put it into operation.

The Company's road consists of two separate tracks, diverging in some parts nearly a mile from each other; the one track for the conveyance of the coal, and the other for the return of the empty cars and the principal transportation of freight. Each of these tracks is forty-seven miles in length, extending from the Delaware and Hudson Canal at Hawley, about nine miles east of Honesdale, through the villages of Dunmore and Pittston, to Port Griffith, which lies on the North Branch Canal and the Susquehanna. The road is operated by gravity, each track being constructed with grades descending in the direction of its business, so that the cars, being elevated to the summits of these grades by means of inclined planes worked by stationary power, are moved at the requisite speed, without the use of locomotives or horses. The present machinery of the road is adapted to the yearly transportation of seven hundred and fifty thousand tons, and the road is so constructed as to allow its capacity to be increased, by doubling the planes, to fifteen hundred thousand tons. The number of coal cars already provided is nine hundred and thirty, besides those for the transportation of other commodities, and that number is, for the present, being increased at the rate of from two to four per day. For the manufacture and repair of cars and the business of the Company, workshops

and a foundry have been established at Hawley. Commodious store-houses have likewise been erected at that place, and at Dunmore and Port Griffith. Capacious basins for the accommodation of canal boats, and dry docks for their repair, with extensive piers from the termination of the railroad, for the reception, screening and shipping of the coal, have also been completed at Hawley. Ample arrangements for the deposit of coal during the suspension of canal navigation, have been made. Two hundred and fifty boats, capable of carrying one hundred and twenty-five tons on the canal as soon as its enlargement shall realize the anticipations entertained of it, and expected to carry this season from one hundred and five to one hundred and ten tons, have been built; and sixty more, making three hundred and nine in all, will be ready by the opening of canal navigation. Extensive wharves and piers, forming basins for the accommodation of boats and vessels, and occupying the front of three entire blocks, have been constructed at Williamsburgh, with ample adjacent grounds for the storing of coal.

The capital of the Company having been originally inadequate to the magnitude of the works, has been increased by successive amendments of its charter, until it now amounts to \$2,100,000, besides \$600,000 of bonds, originally issued by the Washington Company, and subsequently assumed by this company, and convertible into its stock, under an existing authority of its charter. Of this amount about \$2,460,000 have been called in. The whole cost of the road, including sidelings and connections with the various mines — engines sufficient for a yearly transportation of 750,000 tons, and 1,000 cars — the workshops, foundries, storehouses and other buildings — basins, dry docks, piers, &c. — has been \$1,604,837 for the ninety-four miles composing the two lines of road, or about \$17,000 per mile. These works have been executed with a careful reference to durability, and to permanent, as well as immediate economy, under the supervision of James Archbald, Esq., to whose large experience and eminent professional and practical abilities the company are indebted for their faithful accomplishment, and who recently accepted from the Board the appointment of Chief Engineer. The other investments of the capital, lands, canal boats, &c., which, as a whole, have been still more favorably made, will appear in the statement annexed.

The capital invested in boats returns an annual interest at the rate of six per centum, independently of the general business of the company. The boats are run under contracts, which reserve from the canal freights an amount sufficient to ensure their being kept in repair, and to refund their cost besides interest in about seven years, when they are to be conveyed to the boatmen. A fund is thus provided for the purchase of new boats in place of those conveyed or worn out.

The construction of the railroad was commenced in November, 1847, and was so far completed as to be put in operation in June of last year. It was designed to finish the road as far as Dunmore, about two-thirds of the whole distance, where the more readily accessible coal deposits belonging to the Company are situated, in season for the business of 1850; and to occupy an additional year, if necessary, in completing the road to Pittston. But the very superior quality of the coal at Pittston, where the great mass of the deposits belonging to the company are situated, presented a strong inducement to hasten the extension of the road to that place. It was expected that a considerable quantity of coal could be procured from the mines of the company there, and by purchase, if they should not be sufficiently advanced to yield the anticipated supply; and it was deemed highly expedient to get the road and works there, in actual operation as soon as possible, in order to ensure their efficiency during the following season. The determination was therefore made to press forward to the completion of the whole line, a year earlier than had been contemplated, and to make corresponding exertions in opening the mines and providing the requisite cars and canal boats. Although the exten-

sion of the road was accomplished within about one month of the time contemplated, owing to the delays unavoidably incident to the first opening of mines, and to the putting in operation of new works, the production has not been as large as was supposed to be attainable. Considering, however, the magnitude of the enterprise, embracing the whole business from the production of the coal from the company's own lands, the transportation of it by their own railroad and boats, to the delivery of it upon their own wharves adjacent to this city; the difficulty of making all the parts of the road and extensive machinery operate perfectly and conveniently at first, and of adapting the several parts to each other, before any had been actually tried — the fact that the company has, in the partial operation of the first year, reached a production which has not been attained by any other company until after many years, is a gratifying assurance of the general success of the undertaking.

The disproportionate cost of using a road and engines for a quantity about one-seventh of that to which they are adapted — the extra expenses attending the use of new machinery — the heavy charge incurred for demurrage from unavoidable detention of boats, awaiting the completion of the new locks on the canal near Eddyville — the increased expenses of the canal transportation, owing to the unfinished state of the enlargement and the breaches attributable to the newness of its banks, and severe freshets which characterized the last year — and the advance of one-third in the cost of the coal purchased over that produced from the Company's own mines — have to some extent consumed the profits on the amount actually brought to market. The results of the partial business done under these circumstances, are nevertheless more favorable than might have been expected; and its experience has confirmed the calculations which have been made as to the efficiency of the works of the company, and the facility with which their coal can be produced and delivered in this market.

The main lands of the company are at Pittston, on the Susquehanna, lying in the centre of the northern coal field, where the coal is found in peculiar purity, and great abundance, and in veins of massive thickness, from which it is cheaply mined. The coal has been used on board of our transatlantic and other steamers, and proved of superior quality for steam purposes. It has met with equal favor for domestic uses, to which, from its cleanliness and comparative freedom from dust, it is peculiarly adapted.

It is the policy of the Board to increase the production of coal as fast as possible, by vigorous operations in mines already entered, and by effecting new openings with a view to the production of the maximum quantity of coal within the shortest possible period; and they have much gratification in stating that some of these operations are now so far advanced as to enable the Board to estimate, for the first time on the basis of actual experience, the production which may be expected during the present year. There were mined up to the 17th of February, 49,000 tons, nearly all of which was deposited at Hawley. The average production since that time has been 1,126 tons per day, at which rate, allowing twelve days for repairing engines, at slope and shaft, 61,000 tons more, or 110,000 tons in all, will be produced by the first of May. The present production is derived from the following sources, viz: —

Slope No. 1, at Port Griffith, per day	256 tons
Shaft No. 1, at Pittston, per day	325 tons
Two Tunnels, at Pittston, per day	46 tons
Slope No. 3, at Pittston, per day	15 tons
Dunmore mines, per day	484 tons
<hr/>	
Total as above	1126 tons

The production from the two tunnels and from Slope No. 3, is from driving preparatory to more extensively mining the coal, and will in a short time be considerably increased. It is estimated by the chief engineer of the company that the tunnels, together, yield 125 tons per day, Slope No. 2, 44 tons, and Slope No. 3, 50 tons per day, on an average, between the 1st of May and 1st of December, and that 100 tons per day, additional, will be derived from the company's mine at Ford's opening. Computing the average yield of the other openings, between the first of May and December, at their present products, the aggregate business of the year may be estimated as follows, viz: —

Production from all sources up to 1st of May,	110,000 tons
Between 1st May and 1st December,	
Slope No. 1, Port Griffith, per day	256 tons
Slope No. 2 do	44 tons
Shaft No. 1, Pittston	325 tons
Two Tunnels, do	125 tons
Slope No. 3, do	50 tons
Mine at Ford's opening do	100 tons
Mines at Dunmore,	475 tons
180 working days	1375 tons per day
	<u>247,500 tons</u>
makes total estimate for the year	357,500 tons

From which, making due allowances for at least three hundred thousand tons. by engines, we may safely calculate upon or contingencies, and what may be consumed. The following openings in addition to those enumerated, are now being made, from some of which coal may be derived during the present season: —

2 Shafts between Shaft No. 1 and Slope No. 3; and 2 near the foot of Plane No. 2 Pittston. An additional tunnel is also about to be commenced near the head of that plane, with prospects of early success.

The Board, in concluding their report, are gratified to be able to announce that an act of the Legislature of the State of Pennsylvania has been passed, authorizing this Company to acquire and hold the property and effects of "The Wyoming Coal Association," and to create the necessary capital for that purpose. It is proposed for the consummation of such an arrangement by the issue of six thousand shares of additional capital stock. The same act also authorizes an increase in the number of directors from five to nine, and in conformity thereto Daniel Parish, William F. Havemeyer, Moses Taylor and Robert B. Minturn, have been elected by the Board.

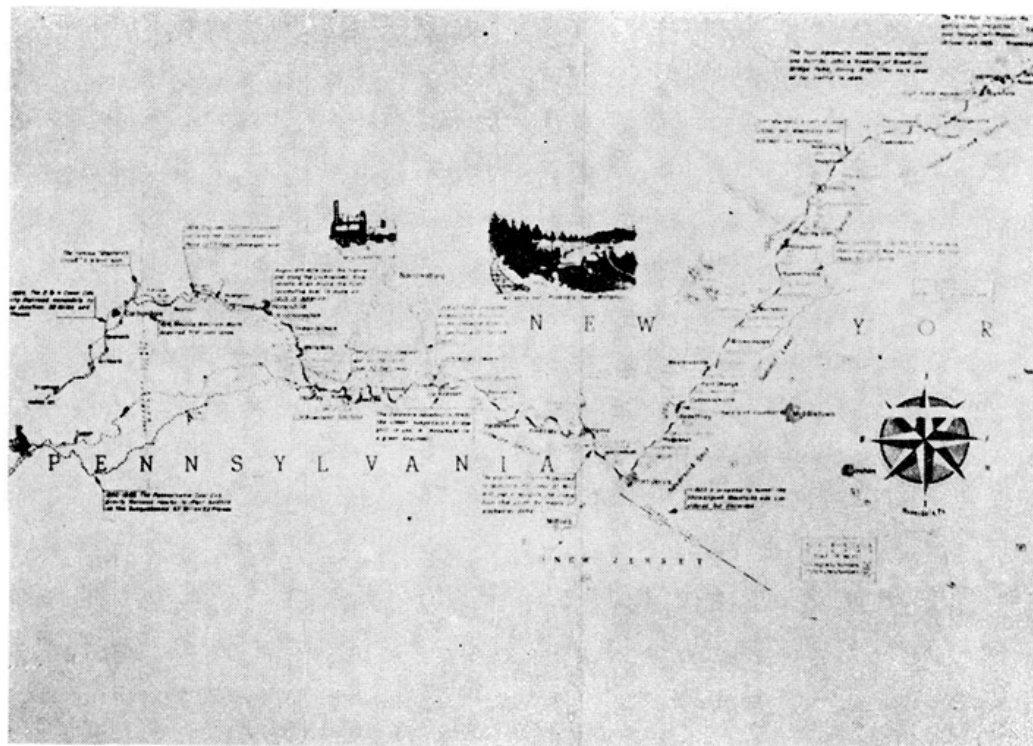
By order of the Board,

IRAD HAWLEY,
President.

NEW YORK, March 19, 1851

APPENDIX II

**ENTIRE ROUTE OF BOTH THE PENNSYLVANIA COAL
COMPANY AND THE DELAWARE & HUDSON RAIL-
ROADS FROM LOCALLY TO THEIR OUT OF STATE
MARKETS**



1. P. C. CO. R.R. ROUTE BEGINNING AT PORT GRIFFITH, PA.
2. HAWLEY, PENNSYLVANIA (LOCATED DIRECTLY ABOVE THE LETTER L IN PENNSYLVANIA).
3. KINGSTON, (RONDOUT) NEW YORK.

APPENDIX III

BLUEPRINT OF THE PENNSYLVANIA COAL COMPANY RAILROAD PLANES

LOADED TRACK

HULL

SCALE

Horizontal 1/8 inch to an inch

Vertical 1/100 inch to an inch

SCALES
Horizontal 1 Mile to an inch
Vertical 1000 Feet to an inch

ACKNOWLEDGEMENTS

To say that this work could not have been written without the co-operation and assistance of those listed below is no exaggeration. My sincere thanks to:

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4. John Hitchcock, Highway Design Engineer, Department of Transportation, Dunmore, Penna.
5. Mrs. Anne C. Kane, Personal Secretary to Joseph Martin of Pennsylvania Coal Company, Rtd., Scranton, Penna.
6. Joseph F. Loughney, Dunmore, Penna.
7. Joseph A. Martin, President of Pennsylvania Coal Company Rtd., Dunmore, Penna. (deceased).
8. William McDonough, Dunmore Postal Employee, Rtd., Dunmore, Penna.
9. Sister M. Nazarene Smith, I.H.M., Marywood College, Scranton, Penna. (deceased).
10. Michael Rowinski, Scranton, Penna. (Pioneer Illus.).
11. Edward Steers, M.D., Harrington Park, New Jersey.

Association of American Railroads, Washington, D.C.

Osterhout Library, Reference Department, Wilkes-Barre, Penna.

Pennsylvania Coal Company, Scranton, Penna.

Railway Progress Institute, Chicago, Illinois.

Scranton, Lackawanna Historical Society, Scranton, Penna.

Scranton Public Library, Albright Memorial Building, Scranton, Penna.

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Mary Theresa "T. C." Connolly, the author, is the daughter of James and the late Catherine (McHugh) Connolly, and resides with her aunt, Ellen Loughney, and her uncle Joseph W. Loughney, Sr. in Dunmore. Graduated with honors from Dunmore Senior High School, Miss Connolly received her B.S. and M.S. degrees from Marywood College. While there, her name was listed in *Who's Who in American Colleges and Universities* and she belongs to Phi Alpha Theta, the international history fraternity for graduate students.

Her specific interest in "The Gravity" stems from the fact that her maternal grandfather Martin J. Loughney, his brother Michael, and five of Martin's six sons worked either on "The Gravity" or for the Erie Railroad. Their vivid recollections of the railroad's illustrious past, long since forgotten by most, coupled with their nostalgic reverence for that bygone era, prompted Miss Connolly to write this history of "The Gravity" as the Pennsylvania Coal Company Railroad was called.

At present, Miss Connolly, is employed by the Scranton School District and teaches history at South Scranton Junior High School.

The Pennsylvania Coal Company's Gravity Railroad in S. R. Powell's 24-volumes on the D&H:

Six volumes in this series have substantial sections on the PCC Gravity Railroad. In all, there are 130 pages of material, much of it in print nowhere else.

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--Volume XVII: 618-662 (44 pages)

--Volume XVIII: 347-348 and 425-426 (4 pages)

--Volume XXIII: 373-393 (20 pages)

--Volume XXIV: 367-390 (23 pages)